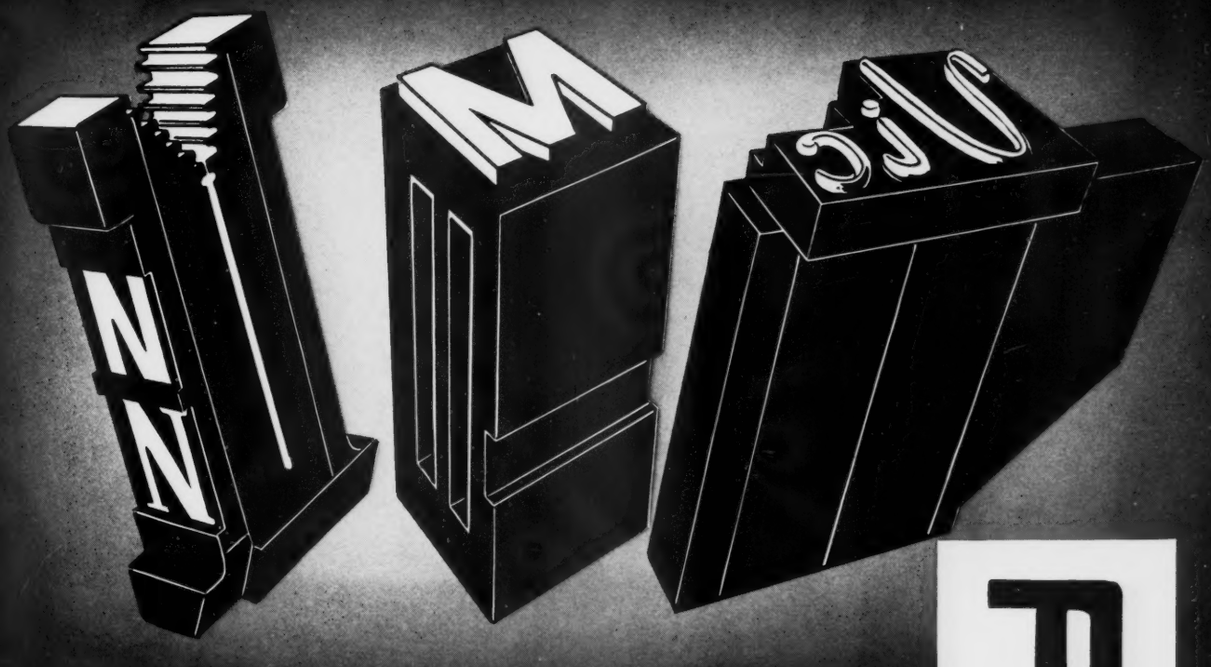
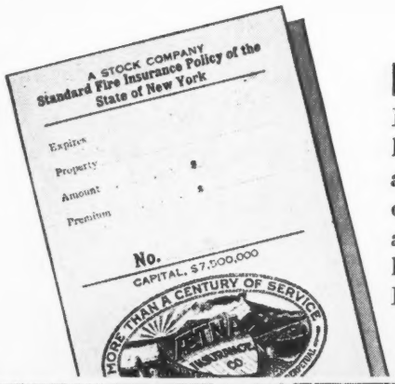
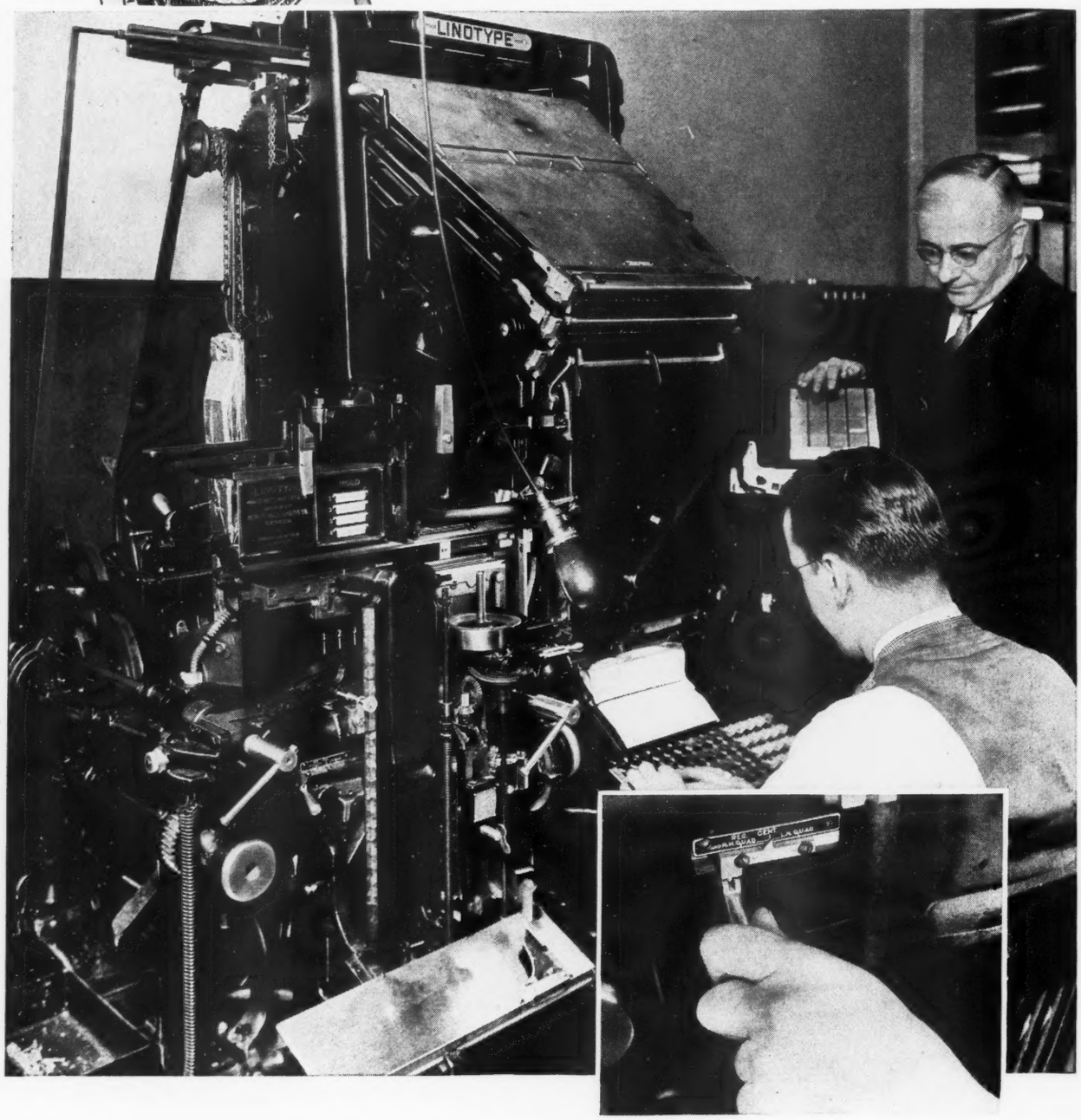
PRINTING EQUIPMENT ENGINEER



A TECHNICAL PUBLICATION FOR PRODUCTION AND MECHANICAL EXECUTIVES IN THE GRAPHIC ARTS INDUSTRY



PRODUCTION INSURANCE—In the printing plant of the Aetna Insurance Company of Hartford, this new Blue Streak Linotype is insuring high-speed production at minimum cost. Says printing department manager George L. Lewis (hand on sorts tray): "Linotype composition is another good policy. Since we installed the Model 31, we've been able to keep abreast of agents' demands for imprinted pieces for the first time in our history." "Yes, and that Self-Quadder deserves a lot of credit," adds operator Howard Smith. "It doubles my output of centered and flush lines."



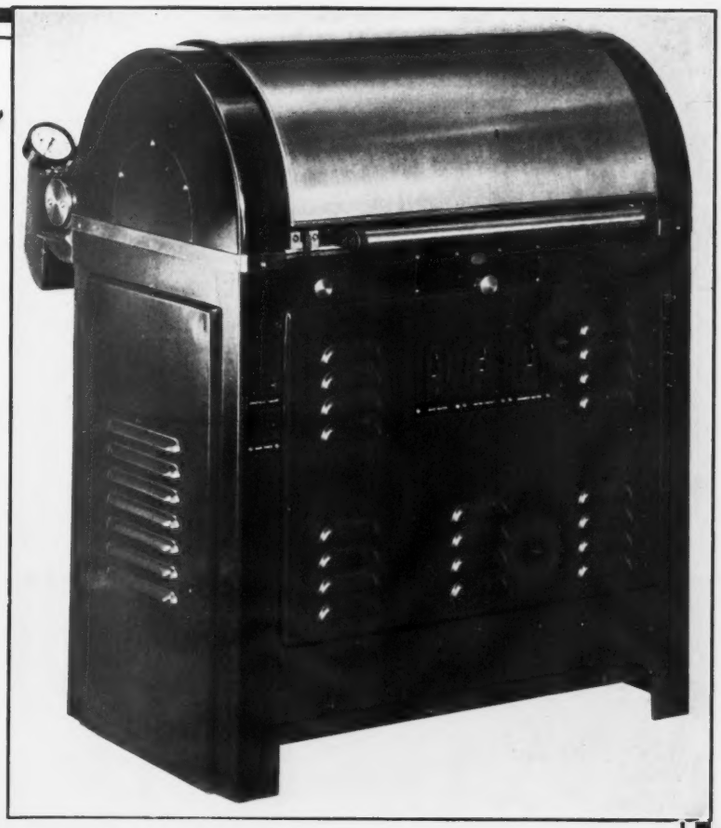
JAW CONTROL—A touch of this little lever and vise jaws move in to center a line automatically . . . or to flush it either way. Linotype Self-Quadder saves all the valuable time that used to be spent counting the quads and shifting them by hand.

TRADE **LINOTYPE** MARK

Set in Linotype Erbar Bold Condensed and Scotch No. 2

Stahi's Master Former

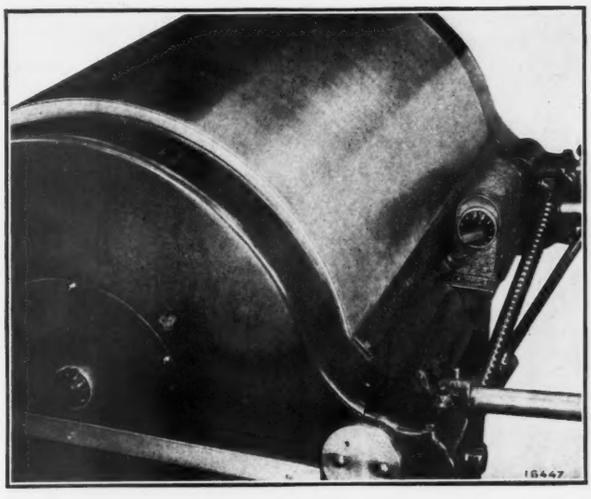
Newest Miracle Machine for Dry Mats



● ● New Vacuum Forming Bolster Bars that automatically follow shrinking dry mat—effecting perfect bolsters—eliminating bolster trouble in casting units. . . . .

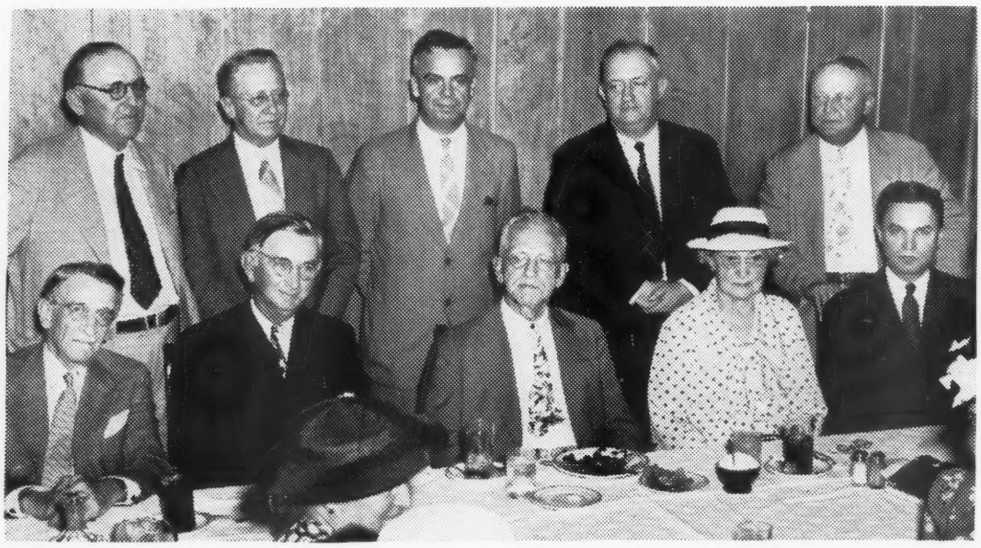
FULL AUTOMATIC HEAT CONTROLS illustrated below, maintain constant temperature whether running at full capacity or standing for long periods of time. Once set at correct temperature no further attention is required. . . . . .

In dry-mat routine you get the best things first from Stahi. And now the miracle machine — the *Master Former* — gives you superior casting levels, with full automatic heat control, self aligning full floating base heater, effecting better and faster electric baking of dry-mats, new full automatic electrical timers, dependable and accurate. Many other new features never before offered to the trade.



STA-HI CORPORATION

1020 CROCKER STREET LOS ANGELES, CALIFORNIA



Newspaper Production Executive Honored on His 75th Birthday

Well known among newspaper production and mechanical executives about the United States is Production Manager I. J. Gardner of the Chattanooga (Tenn.) Times. *On Monday evening, June 5th, at Chattanooga's Hotel Patten, Mr. Gardner was honored with a luncheon by a number of associates and friends. In this picture, seated left to right, are: H. C. Adler, Chairman of the Board of the* Times; *Mayor E. D. Bass, Mr. Gardner, Mrs. Gardner, and Adolph Shelby Ochs, Times' General Manager. Standing, left to right, are: Publisher Will Shepherd of the* Hamilton County Herald; *Julian LaRose,* Times *Executive Editor; Cranston Williams, Manager of the American Newspaper Publishers Association; W. G. Foster, Editor of the* Free Press; *R. M. Cooke, City Commissioner.*

I. J. Gardner, Now 75, Will Retire Soon

At his 75th birthday luncheon, I. J. Gardner announced that he will retire in September from active service as production manager of The Chattanooga (Tenn.) *Times*. He has been connected with that newspaper for fifty-two years.

At a banquet given in honor of Mr. Gardner, Adolph Shelby Ochs, general manager of the *Times* said he saw in Mr. Gardner's career with the *Times* a remarkable demonstration of the mutuality of interests of labor and management. He traced Mr. Gardner's service from printer to foreman of the composing room and production manager.

Secretary of the Chattanooga Typographical Union, Finney T. Carter, described Mr. Gardner as an ideal executive from the printer's standpoint.

Mayor E. D. Bass praised Mr. Gardner as a citizen.

Special guests were Guy Aycock, Mechanical Superintendent of the Chattanooga *News;* Neil J. Crowley, President of the Intertype Composing Company; Cranston Williams, manager of the American Newspaper Publishers' association; Joe Schuman, Mergenthaler Linotype Company representative; and Elbert Mallett, representative of the *Times* stereotype department.

Mr. Gardner's retirement will become effective following the mechanical conference of the Southern Newspaper Publishers' association here (Chattanooga) in September. Mr. Gardner is general chairman of the conference.

Material Side of Printing

Made under the direction of a committee of the New York Young Printing Executives Club consisting of Herbert Kaufman, Louis Trieber, Percy Frost, Jr., L. Pierre Teillon, and O. K. Eden, a motion picture "The Material Side of Printing," presents in seven parts a description of some of the most important elements entering into the production of letterpress printed matter. The subjects covered are paper, type, electrotypes, photo-engravings, ink, presses, and binding. The section describing the manufacture of ink is shown in actual colors.

A plan is now being worked out whereby the picture will be made available to Graphic Arts organizations in the New York area and elsewhere after its showing at the convention of Young Printing Executives Clubs, to be held in connection with the U.T.A. Convention in October. During the summer the picture will undergo revisions, and additions will be made, possibly to include subjects such as pamphlet binding and roller-making.

Ink In Brick Form Predicted by Foss

Faster drying inks for all three printing processes, a widespread use of more exact techniques for color measurement, and printing ink in bricks were visualized by Carl Foss, International Printing Ink, in a talk on future developments affecting advertising and printing, delivered recently. Inks in brick form are a possibility, according to Mr. Foss, and some have actually been formulated. Actual commercial production is a matter of conjecture, he pointed out, but the advantages of "brick ink" are various. Ink in this form would be easy to handle. Storage would be simplified, sufficient quantities of ink being chipped off when needed. These blocked inks would be fed into special fountains which would melt them for use into liquid form.

Crane Cutler-Hammer Vice President

Announcement has been made that C. S. Crane has been appointed Vice-President in Charge of Sales and Engineering for Cutler-Hammer, Inc., Milwaukee.

In addition to his sales responsibilities, it has been announced that Mr. Crane assumes supervision of all the development work for the company, and that he will also have executive control of the engineering and drafting department, as well as the company's patent department. He has been associated with Cutler-Hammer for 29 years.

Mr. Crane announced the appointment of E. W. Seeger as Manager of the Development Department, and P. B. Harwood as Manager of Engineering Department.

Modern Era Needs Large Type

Dr. Matthew Luckiesh indicated that publications were following a consistent trend toward use of larger type. "The smallest type normal eyes can read is 3-point, the average size of type in the body of newspapers is 7-point. Our new techniques indicate that 12 or 14-point is more desirable."

To Edit Technical Sections

Gordon Aymar will act as editor of the art section of the Sixth *Advertising & Production Yearbook,* New York. Eugene de Lopatecki, of Hearst Magazines, Inc., will be in charge of the typographic section, while John J. Flanagan will edit the production data department.

Election Held

On May 16, Norman-Hoffmann Bearing Corporation elected the following officers: W. M. Nones, Chairman of the Board; O. P. Wilson, President and Treasurer; H. J. Ritter, Vice President and Secretary; C. B. Malone, Vice President in charge of plant operations. The Board appointed E. C. Lennon, Asst. Secretary and Asst. Treasurer; J. J. Jenkins, Auditor.

Home from Europe

Confident that normal business between the United States and Europe will continue, Louis E. Pleninger, Manager of ATF's Export Department has returned from a four months visit abroad which took him through England, France, Holland, Switzerland, Belgium, Germany and the Scandinavian countries.

Purchases Plant

G. Wayne Brown, publisher of the Butler County (Pa.) *Record,* and owner and manager of the Record Printing Company, has purchased the equipment and business of the Ziegler Company. The two plants will be merged on or before July 1. The large building at 237 West Cunningham street, will be the new location of the Butler County *Record* and the Record-Ziegler Printing Company.

DOLLAR DAY demonstrates another LUDLOW economy

With its demands for display lines —many of them duplications of the same copy—and for quantities of large price figures, the Dollar Day edition tests the capacity of the newspaper composing room.

■ In plants where facilities are limited, Dollar Day is a nightmare to compositors and a headache to the publisher when he learns the cost of buying more big type or matting and casting, again and again, large price figures or lines.

■ With Ludlow equipment in the composing room, there is no extra cost in handling Dollar Day copy. As a matter of fact, it costs far less to get the ads up, making linage billing more profitable than usual.

■ For when the same line or price figure is repeated in the copy, the Ludlow-equipped plant produces as many lines as desired from one setting of the line in matrices, as shown in the illustration. In the Dollar Day advertisement all of the large price figures and the lines "Dollar Day!" were recast at a noteworthy saving over setting lines of different copy—the cost of which setting is still less with the Ludlow than would be the cost of setting those lines in single types.

■ Recasting with the Ludlow is a daily economy, as well as a tremendous advantage in handling Dollar Day or special edition copy.

■ Be sure to get your savings and extra profits out of next Dollar Day and all future production, by giving your composing room the facilities which the Ludlow system of job and display composition affords. Write us for full information.

Only with Ludlow can you gain ALL these advantages

Type supply that never runs out
Up-to-the-minute typeface designs
Wide selection of faces—full size range
No worn or broken letters
Used effectively by any competent compositor
Instant change of size and face
Faster setting—matrix "gathering"
Easy alignment of different sizes
Rapid and easy spacing
Economies of all-slug make-up
Recasting slugs for repeated copy
Self-quadding and self-centering
Long lines with single justification
Unbreakable italics and scripts
Slugs withstand severe molding pressure
Accuracy in height to paper
Forms once corrected stay correct
Simplicity of mechanism and operation
No cost for type making
Economy of floor space
Low-cost display composition

LUDLOW TYPOGRAPH COMPANY

Set in members of Ludlow Karnak and Tempo families 2032 Clybourn Avenue + + + Chicago, Illinois

Questions and Answers

ABOUT THE NEW GOODYEAR SYNTHETIC RUBBER ROLLER

Q. *How is Goodyear's new synthetic rubber roller made?*

A. It is built of a tested non-rubber compound that combines rubber's resiliency with complete immunity from attack by oil and other solvents usually found in black and color inks.

•

Q. *Is there any proof of this superior resistance?*

A. Yes. Goodyear has been using synthetic compounds in its highest quality gasoline and oil hose and other products exposed to solvents for several years with exceptional success.

•

Q. *How hard is this new roller?*

A. It is softer than ordinary rubber rollers with a firm, smooth surface having a natural affinity for ink that insures quick distribution in a uniform, all-over film.

•

Q. *How about set?*

A. It can be set lighter because less squeeze is required to break up the ink for uniform distribution. The lighter set reduces frictional wear and lessens power consumption.

Q. *Are many adjustments necessary?*

A. No. Goodyear synthetic rubber rollers neither shrink nor swell with temperature or climatic changes. They maintain uniform diameter in any weather, so require minimum adjusting.

•

Q. *Are they fireproof?*

A. Far more so than regular rubber rollers!

•

Q. *Do they improve printing?*

A. Definitely! Goodyear synthetic rubber rollers feed so smoothly and quickly that you get sharp, clear, clean printing from the first turn of the press to the end of the run—throughout their exceptionally long life.

•

Q. *Can these statements be backed up?*

A. Every one is based on extensive testing on modern high-speed presses in large newspaper plants. For complete information, write: Printing Supplies Department, Goodyear, Akron, Ohio.

Also Distributed by

J. THOMAS McHUGH COMPANY	GEORGE RUSSELL REED JR.
305 Merchants Bank Building	431 Clay Street
Indianapolis, Indiana	San Francisco, California

ON YOUR NEXT ORDER *Specify*

GOODYEAR

SYNTHETIC RUBBER PRINTERS' ROLLERS

A Centennial Product of The Greatest Name in Rubber

PRINTING Equipment ENGINEER

CCA
Member of Controlled Circulation Audit

Leading Articles for July, 1939:

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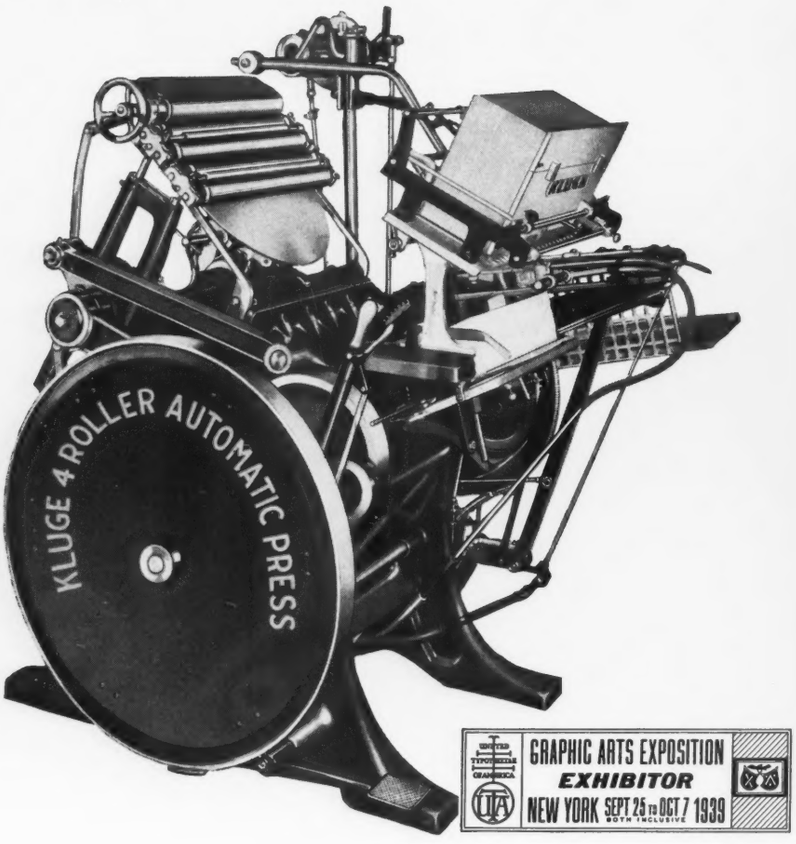
A Technical Publication for the Mechanical Executive Responsible for Printing Production, Equipment and Supplies in the Commercial, Magazine, Private Plant and Daily Newspaper Field.

A NEW PRESS



THE 4 ROLLER KLUGE AUTOMATIC PRESS

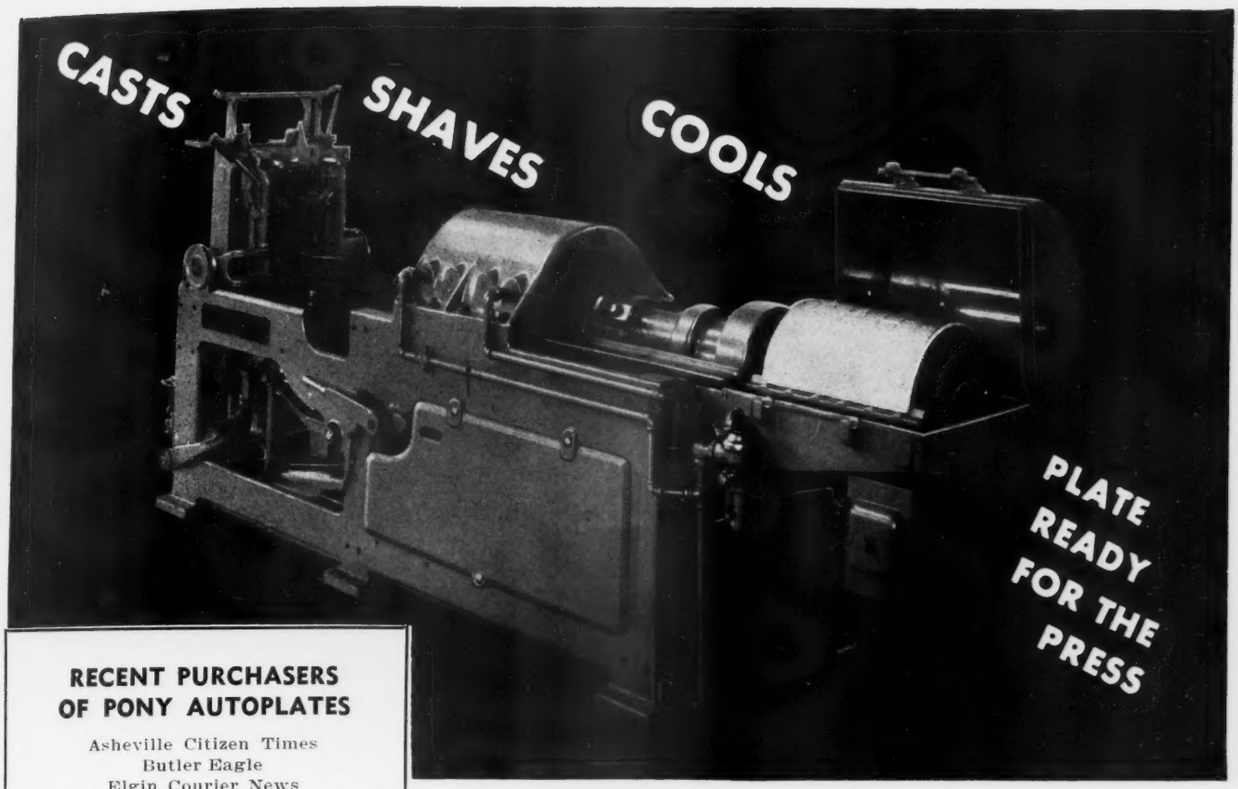
● **Built for the printer who wants to speed up production and increase profits on "run of the mine" job work that does not require the greater ink coverage of the 6 roller Kluge Automatic Press. It provides coverage equal to any 4 roller platen press and in addition it has all the features, such as Rigid Impression, Positive Sheet Control, Selec-Tone Distribution, etc, that make the famous Kluge Automatic Press . . . . .**

The Busiest Press in Any Pressroom.

BRANDTJEN & KLUGE · INC.

MANUFACTURERS · SAINT PAUL, MINNESOTA

BRANCHES IN BOSTON · NEW YORK · PHILADELPHIA · CHICAGO · ATLANTA · DETROIT
ST. LOUIS · SAN FRANCISCO · DALLAS · LOS ANGELES · MINNEAPOLIS · CANADA: SEARS, LTD.



The Heavy-Duty PONY AUTOPLATE as shown at the A. N. P. A. Mechanical Conference

RECENT PURCHASERS OF PONY AUTOPLATES

Asheville Citizen Times
Butler Eagle
Elgin Courier News
Framingham News
Green Bay Press-Gazette
Jackson Citizen Patriot
Johnstown Tribune
Kalamazoo Gazette
La Hora, Santiago, Chile
La Razon, Buenos Aires, Argentina
Montgomery Advertiser
Richmond Times-Dispatch
Sacramento Bee
Salt Lake Tribune
Victoria Colonist
Waukegan News Sun

RECENT PURCHASERS OF VACUUM EQUIPMENT FOR AUTOPLATES

Asheville Citizen Times
Birmingham News & Age-Herald
Chicago Herald Examiner
Chicago Tribune
Cincinnati Times-Star
Cleveland News
Cleveland Press
Dallas News
Des Moines Register & Tribune
Detroit News
Elgin Courier News
Green Bay Press-Gazette
Jackson Citizen Patriot
Johnstown Tribune
Kalamazoo Gazette
Knoxville News-Sentinel
Louisville Courier-Journal
Memphis Commercial Appeal
Minneapolis Star
Montgomery Advertiser
New Orleans Times-Picayune
New York Evening Journal
The New York Times
Philadelphia Inquirer
St. Louis Post Dispatch
Sacramento Bee
Salt Lake Tribune
Springfield Newspapers
The Toronto Star
Victoria Colonist
Nichi Nichi Shimbunsha, Tokyo

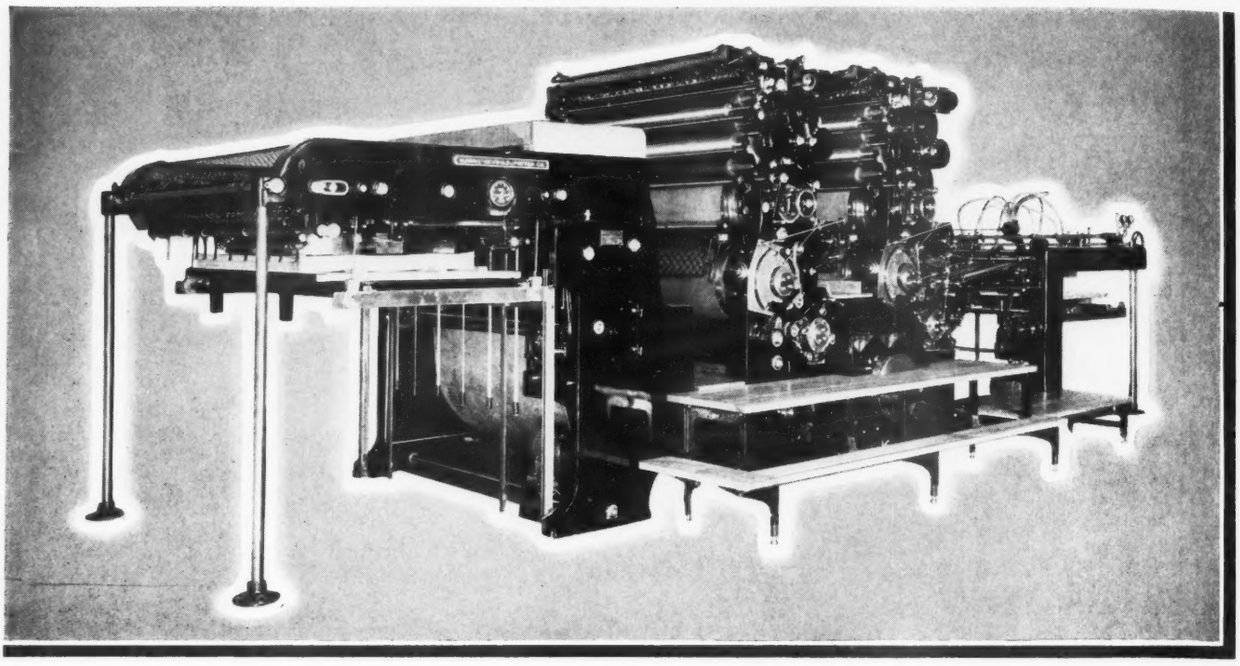
How the PONY AUTOPLATE Effects Definite Savings

- **Saving in floor space.** The Pony Autoplate takes up less than half the space required by handbox equipment.
- **Saving in the amount of metal melted and cast.** This saving, due to the lighter plates cast by the Pony Autoplate, amounts to approximately 10 per cent.
- **Saving in cost of recasting defective plates.** This saving results from the uniformity of mechanical operation and the elimination of handling strains.
- **Saving in cost of air.** No compressed air is needed in the operation of the Pony Autoplate.
- **POWER ECONOMY.** The Pony Autoplate motor does not run continuously. It operates only when the plate is being shaved.
- **EXTRA AGATE LINES.** In many cases the Pony Autoplate can be designed to provide an increased page length of 2 and sometimes even 4 lines—from 16 to 32 additional lines of type available per page.
- **VACUUM EQUIPMENT** can be furnished for both Heavy Duty and Standard Autoplates. A large number of newspapers have improved the quality of their stereotype plates in recent months by means of Vacuum. Write for particulars.

WOOD NEWSPAPER MACHINERY CORPORATION

Plainfield, New Jersey **New York Office, 501 Fifth Avenue**

BORROW THE WISDOM OF OFFSET EXPERIENCE



• Let the skill of Harris engineers and craftsmen furnish the sources of profit in the pressroom. There are valid reasons for Harris leadership, and that leadership should be the key to your choice of Offset equipment.

In every Harris Offset Press there is Harris undivided responsibility reflected in dependable equipment that turns out a maximum number of high quality saleable sheets hour after hour.

NOW *Standardization*
IN THE CHEMICALS FOR PLATE MAKING
HARRIS
LITHO-CHEMICALS

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

OFFSET IS THE MODERN METHOD

HARRIS-SEYBOLD-POTTER-COMPANY

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

General Offices: 4510 E. 71st Street, Cleveland, Ohio. • *Harris Sales Offices:* New York, 330 W. 42nd Street; Chicago, 343 S. Dearborn Street; Dayton, 819 Washington Street; San Francisco, 420 Market Street. • *Factories:* Cleveland, Dayton

Drop Him Into Remelting Furnace!

IT IS MORE DIFFICULT TO PRODUCE PRINTING AT A PROFIT WITH OBSOLESCENT EQUIPMENT THAN IT IS TO TAKE THE RESIDUE PRICE FOR THAT EQUIPMENT, SEIZE OLD MAN OBSOLESCENCE BY THE HORNS AND DROP HIM INTO A REMELTING FURNACE IN FAVOR OF MODERN EQUIPMENT. THE DIFFERENCE IS THAT WITH MODERN EQUIPMENT YOU WILL HELP YOUR FIRM MAKE A PROFIT ON THE WORK DONE ON THE NEW EQUIPMENT OVER WHICH YOU HAVE SUPERVISION.

Offset

As a term can be used to express or describe any type of lithographic printing produced on an offset press.

By ADAM HENRI REISER

PRINTING, a most interesting avenue of endeavor, presents many attractive and enlightening trends of thought. Just examine the word, *printing*, for example. "The act of reproducing a design upon a surface by any process," is the way Funk and Wagnalls define it. Or; that which is printed, or the forming of letters in imitation of printed characters. From this come the instructions to "Print Your Name," even though you do so by pen or pencil by hand. It's strange, but script simulating handwriting is also found in typographical characters.

Script is also engraved by steel engravers and lithographic engravers for bond texts, stock certificate backs and stationery, as well as any other type of lettering. Similar work is also done by sketch artists making copy for photographic reproduction. One of these methods of printing using the means of photographic reproduction is lithography. In making use of the photographic principle, the lithographic process has come a long way from its original way of doing things as invented by Alois Senefelder. For lithography, as the derivation of the name implies, means writing on stone: *Litho* from the Greek *lithos*, meaning stone; *graphy* for the Greek *grapho*, to write.

Early lithography had all of its work printed from stone, for work was engraved as well as drawn thereupon. But even the inventor, Senefelder, recognized the value of metals for this new art and tells of it in his notes. Light sensitive papers were also used to transfer work or images on to the stone's surface. Autographic papers were also used, with music drawn upon their prepared surface with a special ink. This was then transferred to the stone's surface, which was then chemically treated for printing. When zinc and aluminum came into vogue with the rotary presses, many of the old methods were carried over to obtain a printing

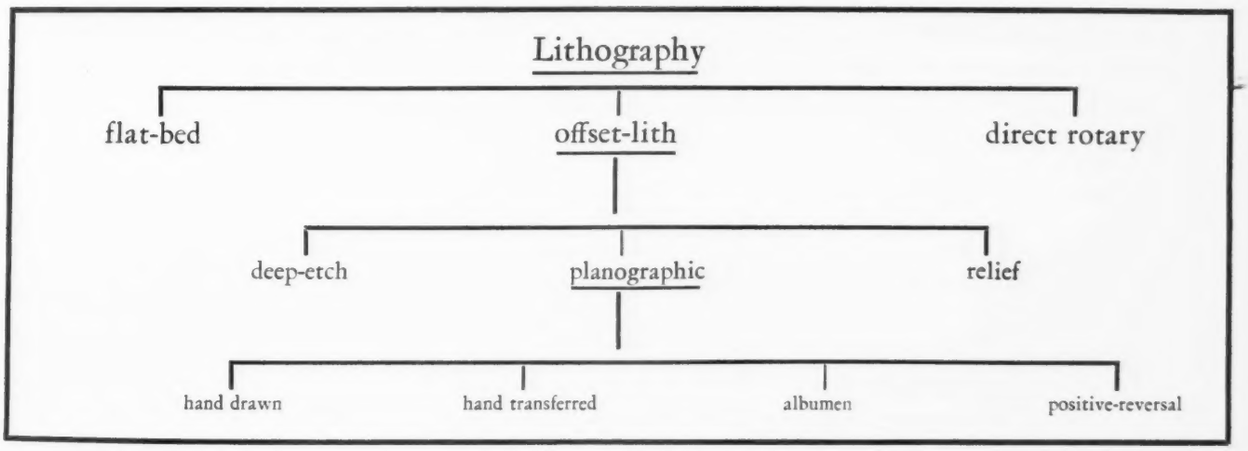


image. Along about the turn of the century, however, considerable work was being done to get a printing image by photographic means.

It remained for the offset press to get real results from these photographic prints. By now, through use of the photographic principle, it is possible to get an intaglio image, a planographic image, and a relief image. And it might be interesting to note that this takes place on metals such as zinc, aluminum, monometal, and stainless steel. Most of the work printed lithographically today is run from an offset press, and the largest proportion of it is run from planographic images. This has led to use of the term *planography*, to designate this type of work. Because of the use of the photographic principle, embodied in modern lithography, the term *photo-lith* has also come into common use.

There are some who feel that the use of the offset principle of lithography should compel an inclusion of the term offset, and thus have coined the phrase *offset-lith*. As a matter of actual fact, that term is all-inclusive and can be used to cover any phase of the work done on the lithographic offset press whether it be intaglio, relief or planographic.

It can be seen from the brief introduction that the mushrooming of lithography has given rise to what seems to be a confusing terminology. To be on the safe side, it is well to remember that *lithography* is the generic term covering the entire field of lithographic printing. It is also well to use the term *offset-lith* to cover any type of lithographic printing that is produced on the offset press. Equipment manufacturers use that term to cover machinery and equipment that contribute to lithographic production in offset work. Of course if it is desired to further parse the subject, work may be described as *offset-deep-etch* or *high-etch* (relief or albumen or planographic work). Under this last division comes the hand-drawn work, and hand-transferred work which is also put to the surface of the plate. For an all-inclusive term, though, *offset-lith* seems by far the most descriptive and the term that may get you in the least trouble

Employment and Service

Employers, production and mechanical executives may insert notices in this department.

Items for this department may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing* Equipment *Engineer*, 1276 West Third St., Cleveland, O.

POSITION WANTED—Printing executive, young, always employed, desires change. 18 years training in highly efficient composing methods. Knowledge of other departments. References, tact, personality, intelligence much above average. Reply Box 76.

EXECUTIVE PRODUCTION MANAGER—Available to a progressive, modern printing plant. Prefer medium sized plant doing publication work. U.T.A. graduate with 12 years experience. Familiar with Cost, Estimating and Purchasing. Married man; alert and progressive; pleasing, convincing personality. Reply Box 77.

SALESMAN—Printing equipment or printing supplies. Have wide acquaintance with printing trades in midwest and southwest territories. Desire permanent connection with leading manufacturer in the Graphic Arts field. Reply Box 78.

GRAPHIC ARTS EXPOSITION
New York, Sept.25 to Oct. 7
IS YOUR SHOW

ATF Announces Balloons

Balloon Light, Bold and Extra bold are three new type faces just released by American Type Founders. They were designed by M. R. Kaufmann.

The three new faces were designed as companions to the Kaufmanns and align with them. They are cast on a square body for easy setting of combinations. Balloon Light matches Kaufmann Script in color, while

BALLOON LIGHT, **BOLD**
AND EXTRABOLD

Balloon Bold matches Kaufmann Bold. Balloon Extrabold used with either of the Kaufmanns will provide contrast. Because of the alignment feature they can be mixed with the Kaufmanns, and will make excellent alternate caps for the Kaufmanns.

The Balloons may be used alone and in combination with other faces and for initial letters.

Sizes are from 10 to 96 point.

Life Changes Print

Because of advertiser and reader preference, *Life* announces that after the June 26 issue, the use of gravure printing will be discontinued. The issue of July 3 and all subsequent issues will contain no gravure for either advertising or editorial purposes. All specifications, closing dates and other mechanical requirements remain the same.

Mark Mullee Passes

Mark Mullee, former treasurer of the International Association of Printing House Craftsmen, and member of the Newark Club of Printing House Craftsmen for many years passed away in Newark, N. J., on Wednesday evening, June 14. At the time of his death, Mr. Mullee was treasurer of the Newark Club.

Employees Protected

A group life insurance policy involving a total of $45,500 has recently been acquired by Shawprint Incorporated, at Lowell, Mass., protecting 51 employees.

The printing firm and the employees will share in the payment of the premiums, the policy being on the contributory basis.

Forty Type Faces For Specialty Printer

Intertype Corporation has issued 16 page booklet printed in black, yellow and red. The faces shown are suitable for line-composing machine composition for the specialty printer, the trade typographer and the commercial printer. Duplexed in sizes up to and including 18 pt. are such faces as Bernhard Fashion and Park Avenue, Parisian and Rivoli, Greeting Monotone and Adonis, etc. The specimen settings are printed on all-over yellow background.

Address Correction

The address of Frank S. Barr who is associated with Geo. H. Morrill Div., General Printing Ink Corporation, in the capacity of service engineer, as reported in the May issue of *Printing* Equipment *Engineer*, should be 1445 West Jackson Blvd., Chicago, Ill. Mr. Barr can be reached at the new address.

Intertype Matrix Faces

Shown here are the 10 and 12 point sizes of Intertype Futura Demibold with Oblique and the 14 point size of the Medium with Demibold. Another new combination in two-letter display faces is 24 point Intertype Garamond Bold with Garamond.

THIS Paragraph set in the 10 point size of Intertype Futura Demibold duplexed *with Oblique* 1234567

10 Piont Futura Demibold with Oblique

THIS Paragraph is set in the twelve point Intertype Futura Demibold *with Oblique* 234

12 Point Futura Demibold with Oblique

Paragraph set in 14 point Intertype Futura Medium with Demibold 12345678

14 Point Futura Medium with Demibold

ABCabcdefg123
ABCabcdefg123

24 Point Garamond Bold with Garamond

Executives

Want more than anything else to improve newspaper printing—Newsprint, photography, roto, offset and interdepartmental cooperation discussed at A. N. P. A. Mechanical Conference

By MAC SINCLAIR

THE registration at the Philadelphia A.N.P.A. Mechanical Conference consisted of approximately 480 mechanical and production executives. The conference sessions were held at Hotel Benjamin Franklin on June 5, 6 and 7. During the three-day session a tremendous amount of technical discussion took place.

Offers Research Facilities

The outstanding address of the Conference was made by President Mark Ellingson of Rochester Athanaeum and Mechanics Institute, who spoke on *Assistance to Newspaper Mechanical Departments*. Dr. Ellingson cited the investigational and research programs sustained by other fields and stressed the need for this work in the printing industry. He offered the facilities of the Institute as a nucleus from which the start.

The only concrete action affecting equipment makers to come out of the departmental meetings was the resolution requesting the line-composing machine manufacturers to standardize letter alignment of two-letter 18 and 24 pt. display matrices, and a request that the composing machine manufacturers standardize on names for similar series of type faces.

It was evident during the discussion of an imposing list of 37 topics on newsprint that production and mechanical executives want better newsprint.

Manufacturers' and Suppliers' Exhibits

An important part of the conference was the display by more than 40 equipment manufacturers and suppliers of their latest products. A brilliant panorama of recent improvements in newspaper making equipment and materials was presented to the production and mechanical executives. The display booths were well decorated and appropriately lighted. A list of exhibitors, description of equipment and supplies on display, and company representatives in attendance at the Philadelphia Conference appeared in the June issue of *Printing* Equipment *Engineer*.

Manager Walter E. Wines and the Mechanical Committee are to be complimented upon the excellence and variety of program material. Special recognition was given to the preparation of newspaper illustrative material to conform to the limitations of newspaper printing processes.

The departmental meetings were successful in every way from the standpoint of the executive who wanted specific technical information on certain details related to mechanical operation.

One element cropped up in the departmental meeting discussions every now and then, *i.e.*, the necessity for interdepartmental cooperation. It is pleasing to note that executives themselves recognize this.

An imposing display of various kinds of newspaper printing prepared under the direction of the Mechanical Department Manager attracted much attention.

Fred Keefe, Chairman of the Mechanical Committee opens the A.N.P.A Mechanical Conference in Philadelphia on Monday, June 5th, and introduces Mark Ellingson, President of the Rochester Athanaeum and Mechanics Institute.

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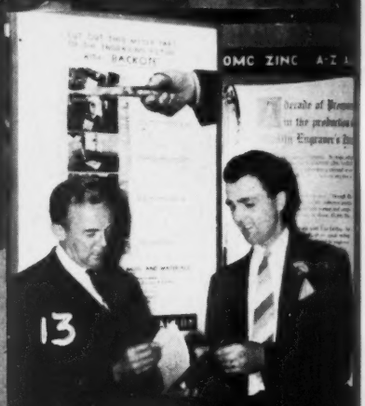

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Monday Morning

Dr. Ellingson Encourages Newspaper Research

DR. MARK ELLINGSON, President of the Rochester Athenaeum and Mechanics Institute, was introduced by Chairman Fred Keefe, who announced Dr. Ellingson would discuss *Assistance to Newspaper Mechanical Departments*. Dr. Ellingson's remarks proved conclusively that the newspaper publishing industry is extremely backward in facilities for the education of those engaged in the technical side of the Art. He compared the number of institutions of higher education in teaching, medicine, law, music and agriculture with the small number of schools teaching the techniques of newspaper mechanical production. He looks forward to the day when there will be a national newspaper institute which will be a part of a larger school of Graphic Arts and which will do for this complex and highly technical field what our great medical centers are doing for the medical profession.

Said he:

"You men carry one of the heaviest responsibilities of any professional group with respect to complex technical procedures, namely, the production of our daily newspapers. Hardly a manufacturing operation of any kind involves greater skill; your work is always under pressure and it is your duty to coordinate a complicated process.

"It is true that the ink, paper and equipment manufacturers have contributed their work to solve some of these problems, but despite these efforts we have barely scratched the surface in solving some of the fundamental difficulties that confront the technical side of newspaper operation.

"Let us examine the field of medicine as compared to the field of newspaper production. At the present time there are 76 medical schools in the United States giving technical work on the university level. Of these, 11 carry on practical research; 2 carry investigational research and 3 provide a center in which is collected every bit of available printed information related to medical research and practice to which doctors can go or can write to secure specific information about the problems confronting them.

"Newspaper executives," stated Dr. Ellingson, "have arrived at solutions to their problems the hard way—by taking off their coats and going to work." This has been necessary because there has been and is now no organized center to which executives might turn when coming upon pressing problems."

A rather startling comparison was made by the speaker when he stated that according to the government's 1935 census of manufactures the value of the products of the printing, publishing and allied industries amounted to $2,160,000,000, while for the chemical industry the value of products was $2,800,000,000, yet in this period the American printing industry was publishing less than 100 pages of bibliography while the chemical industry published over 5,000 pages carefully edited and printed.

Dr. Ellingson offered such facilities of his Institute that will fit into the program of the members of the mechanical conference.

Invitation for 1941

At this juncture, Chairman Keefe introduced Burroughs Matthews, President of the New York State Publishers Association, and who is also associated with the Greater Buffalo Press. He extended an invitation to the A.N.P.A. Mechanical Conference to meet in Rochester in 1941.

Newsprint Question Box

The next topic on the program was *Newsprint Question Box*. This part of the program consisted of an imposing series of more than 37 questions. Chairman Keefe read the questions and in turn Engineer W. G. McNaughton of the News Print Service Bureau, New York, gave detailed answers. Considerable discussion arose from the floor as the answer to each question was given. It is not possible to give all the questions and answers in this article, but a few of the ones creating the most interest are printed.

Discussion of newsprint brought forth complaints from executives present. Most of these were related to uniformity, color, proper winding of rolls, humidity and defects in the sheet. In answer to some of the queries, the speaker referred executives present to the technical bulletins published by the U. S. Bureau of Standards and Government Printing Office some time ago.

Walter Hogan, Pressroom Superintendent of the Long Island *Daily Press*, stated he uses partly paper received from Norway. He said it had great absorbent power but no two shipments are alike in finish. He wanted to know if the use of less sulphite meant less tensile strength. Mr. McNaughton said he didn't think so, since there was no more or less sulphite average in overseas paper than in domestic paper. Paper acts differently in different pressrooms. He suggested the paper be examined for its relation to ink. However, operating technique in overseas mills has not been developed to the point it has in America.

In answer to the question as to why there is more show-through on some days than others, Mr. McNaughton said this difficulty may be due to humidity conditions in the pressroom. No filler tends to increase opacity of the sheet. Clay tends to make paper more transparent.

Mr. McNaughton stated the objection to metal cores is high initial cost and great weight. Iron cores are rarely used. If care is used at the mill, plugs can be driven into paper cores at the mill without striking the roll and breaking the edges of the paper.

Mechanical Superintendent A. H. Burns of the New York *Herald Tribune*, said it seemed to him that corrugated steel cores spirally wound would be of great help in reducing damage.

Production Manager John Park stated the Chicago *Tribune* uses steel cores entirely, and do not get oval cores when the rolls are put on the reels. As a result there is a lot less damage. All cores are shipped back to the mill. However, he stated the case of the *Tribune* probably is exceptional because there is much less damage when shipment is by rail than by boat.

Pressroom Superintendent Sidney Weiskittel of the Cincinnati *Enquirer* wanted to know if the spiral winding didn't show in the paper, to which Mr. Park replied that on the *Tribune* the rolls are not run down close on the core,

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Some Newspaper Executives and Manufacturers' Representatives Attending Philadelphia ANPA Mechanical Conference, June 5, 6 and 7

1—G. A. Disher, Mechanical Superintendent, Southam Newspapers, Montreal, Canada; Charles J. Reber, Stereotype Superintendent, New York Daily News; *W. J. Milani; Frank Otstot, Stereotype Superintendent, Springfield, (O.)* News *and* Sun.

2—Tom Donwody, Editor, The American Pressman, *Pressmen's Home, Tenn.; Maurice A. Hagan, Engraving Superintendent, Philadelphia* Inquirer.

3—H. R. Freund, Chief Engineer, Intertype Corporation, Brooklyn, N. Y.; Al Oberg, Composing Room Superintendent, Flint (Mich.) Journal; *John Hayden; Martin Hayden, Mechanical Superintendent, Norristown (Pa.)* Times-Herald.

4—William V. Cowgill, Mechanical Superintendent, Cleveland News; *John Meadth, Vice President, Lanston Monotype Machine Company, Philadelphia, Pa.; Dr. Mark Ellingson, Rochester Athenaeum and Mechanics Institute; Albert Lengel, Production Manager, Oakland (Calif.)* Tribune.

5—Howard J. Lamade, Business Manager, Williamsport (Pa.) Grit; *W. E. Wines, Manager, and Donald Boyce, Assistant to Mr. Wines, A.N.P.A. Mechanical Department, New York.*

6—Leslie J. Griner, Mechanical Superintendent, Youngstown (O.) Vindicator; *Edgar A. Mills, Manager, Eastern Newspaper Supply Co., A. C. Chagnot, Electrician, and Joseph J. Cory, Chief Machinist, Youngstown (O.)* Vindicator.

7—John E. Allen, Editor, The Linotype News.

8—E. A. Booth, E. A. Booth Rubber Company, Cleveland, Ohio.

9—G. R. Bolton, Composing Room Superintendent, Joliet (Ill.) Herald-News *Frank Sherman, Director of Publicity, Lanston Monotype Machine Company Philadelphia; Russ Birchfield, Eastern Representative,* Printing Equipment Engineer.

10—John Donald, Production Manager, King Features, New York; S. E. Haigh, Sales Manager, Lanston Monotype Machine Co., Philadelphia; Thos. D. Rawlings, Thos. D. Rawlings Co., Cleveland, O.

11—D. W. Smythe, Representative, Walter Scott & Company; Walter T. Hagan, Long Island (N. Y.) Daily Press; *K. T. Greenleaf of H. G. Craig & Company; J. Terrance Mahan, Stereotype Superintendent, Akron (O.)* Beacon-Journal.

12—C. W. Govier, Production Manager, Boston Herald-Traveler; *Frank Giles, Intertype Representative; H. A. Orrell, Mechanical Superintendent, Tulsa (Okla.)* Tribune; *L. C. Penry, Mechanical Superintendent, Greensboro (N. C.)* News-Record.

13—Roy Manny, President, and W. R. Comber, Atlantic Zinc Works, Brooklyn, N. Y.

14—George C. Stevens, Press Superintendent, Scranton (Pa.) Times; *Joseph Lawson, Jr., Stereotype Superintendent, White Plains (N. Y.)* Reporter; *E. W. Gordon; New England Newspaper Supply Co.; Charles Frederickson, Mechanical Superintendent, Westchester County Publishers, Yonkers, N. Y.*

15—Ben Offen, B. Offen & Company, Chicago, Ill.; William Spaulding, Engraving Superintendent, Albany (N. Y.) Knickerbocker News; *Frank S. Duncan, Press and Stereotype Foreman, Portsmouth (O.)* Times.

16—Earl E. Anderson, Composing Room Superintendent, Rockford (Ill.) Star *and* Register-Republic; *Mac Sinclair, Editor,* Printing Equipment Engineer.

Printing Equipment At Exposition In Impressive Setting

VISITORS to the Fifth Educational Graphic Arts Exposition at Grand Central Palace, September 25 to October 7, will find the displays of marvelous developments in printing machinery and supplies presented in a most impressive setting. A symbolic color scheme of maroon and buff has been adopted which will harmonize with the type of exhibits which will be shown. Booth equipment will be of unusual beauty and dignity. Back walls will be of panelled walnut plywood and railings of walnut trimmed in black and chromium.

Reservations from Craftsmen's and Typothetae locals as well as from members of other trade associations who will be holding their annual conventions in New York during the period of the Exposition are coming in steadily.

The attendance will be a controlled attendance. The Exposition management is keeping very definitely in mind that the Exposition is "the industry's own show" and the appeal will be strictly to those persons engaged in the industry. Admission will be by tickets of admission which will be distributed by exhibitors and by the Exposition Company only to persons engaged in the industry.

but that the spiral pattern does show on the last few winds.

Question No. 6, related to loosely wound and baggy rolls perhaps caused more discussion than any other single question in the set. Mr. McNaughton stated loose windings are due to the sheet being thinner on one side than the other and also hard spots. If the sheet is thin on one side that side of the roll will be soft. The machine operator makes adjustments in his machine to correct defects in the paper. The trouble sometimes is due to uneven heating of the calendering rolls. Baggy rolls are caused by inexperienced operators.

Walter Hogan of the Long Island *Press* wanted to know why, if the mills were so careful with their tests why baggy rolls find their way into the pressroom. Mr. McNaughton stated this sort of roll was due to the human factor.

Pressroom Superintendent Weiskittel of the Youngstown (O.) *Vindicator*, wanted to know if there was any way of testing other than by hand. Mr. McNaughton feels there is no better way than by relative resonance test by the inspector.

Question No. 10 precipitated considerable discussion because it related to defects in paper stock with which pressmen must contend and which are the source of considerable trouble. Mr. McNaughton stated frequently defects which cause paper breaks in the press are so small as not to be visible on the paper-making machine. The paper is running at 1200 f.p.m. and the defects are not detectable to the inspector even though careful regulation is maintained on the paper-making machine.

William V. Cowgill, Cleveland *News* Mechanical Superintendent asked why newsprint manufacturers do not have practical paper men visit newspaper pressrooms to see how their product performs. It was also stated that other firms supplying newspapers test their machines and materials before they are delivered to the user but such is not the case with manufacturers of newsprint.

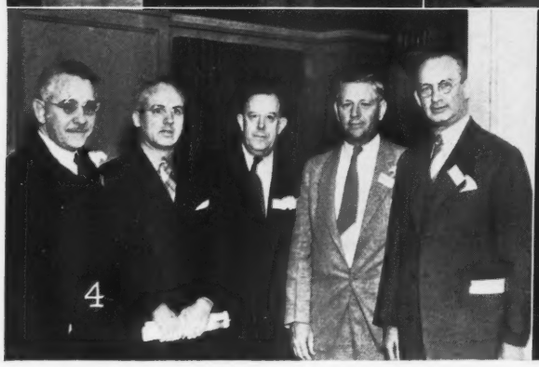
Monday Afternoon

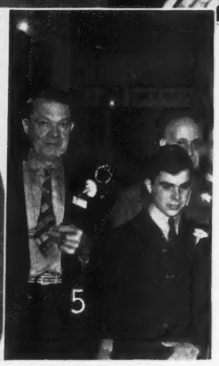
Four departmental meetings were held Monday afternoon. The meetings occurred simultaneously.

At the Composing Room meeting, Production Manager Leon A. Link of the Cleveland *Plain Dealer*, presided as chairman; John A. Burke, Production Manager of Gannett Newspapers, and J. E. Martin, New York *Sun* Production Manager, were named as co-chairmen.

At the Stereotypers meeting, F. L. Yeager served as chairman. He was assisted by Mechanical Superintendent A. H. Burns of the New York *Herald-Tribune* and Production Manager J. W. Park of the Chicago Tribune.

Alexander Kramer, Pressroom Superintendent of the Syracuse (N.Y.) *Post-Standard*, was chairman of the Pressmen's meeting. He was assisted by Co-Chairmen Walter Ogden, Pressroom Superintendent of the Cleveland *Press*





Well-Known Executives Attending the A.N.P.A. Mechanical Conference, Philadelphia, Hotel Benjamin Franklin, June 5, 6 and 7

1—Left to right: John King, Ludlow Typograph's sales manager; William V. Cowgill, Mechanical Superintendent, Cleveland News; *Eugene Jagareski, Mechanical Superintendent, Albany* (N. Y.) *Knickerbocker* News; *Bernard F. Garrity, Mechanical Superintendent, Hartford* (Conn.) Times.

2—Reader's left to right: John A. Burke, Production Manager, Gannett Newspapers, Rochester, N. Y.; Fred W. Schaub, Business Manager, Decatur (Ill.) Herald-Review.

3—Your left to right: Earl Barker, St. Louis Star-Times, *Composing Room Superintendent; Lee Beamer, Northern Ohio Mergenthaler Linotype representative; Russell Calkins, Machinist, Lima* (O.) Daily News; *P. M. Wragg, Composing Room Superintendent, Lorain* (O.) Journal; *S. H. Kauffmann, Assistant Business Manager, Washington* (D. C.) Star.

4—Left to right: Howard Lamade, Business Manager, Williamsport (Pa.) Grit; *John J. Shea, General Mechanical Superintendent, New York Hearst Newspapers; Arthur Burns, Mechanical Superintendent, New York* Herald Tribune; *John Park, Chicago* Tribune's *Production Manager; Fred'k H. Keefe, Publisher, Newburgh* Beacon (N. Y.) News.

5—Gene Doyle, Mechanical Superintendent, Toledo (O.) Blade; *Robert Taylor, son of Auburn Taylor, Charleston* (W. Va.) Gazette. *Robert was the mascot of the Philadelphia Conference. His faculty for getting acquainted with the men attending the conference made him many friends.*

and J. J. Shea of the New York Hearst Mechanical Department.

The Engravers' meeting was chairmaned by Photo-engraving Superintendent Maurice Hagan of the Philadelphia *Inquirer*, assisted by Howard J. Lamade of the Williamsport *Grit* and Don P. Miller of the Allentown (Pa.) *Call*. At this meeting, Frank Onken, Chief Artist of the Baltimore *Sun*, presented a paper on *Retouching of Photographic Copy*.

Monday Evening

Newsprint Question Box Resumed

At the Monday evening session, the unfinished portion of the *Newsprint Question Box* was resumed, at which time Mr. McNaughton, News Print Service Bureau Engineer, took up answers to stated questions propounded on the program.

The question of newsprint color is a matter of individual taste. Eye specialists hold that a greenish-gray white is to be preferred. However, the general color preference for morning papers seems to be green-white and for evening papers blue-white stock.

Production Manager Leon A. Link, Cleveland *Plain Dealer*, wanted to know if there have been any attempts on the part of newsprint manufacturers to work towards a standard color. Mr. McNaughton replied by saying that since the World War (at which time newsprint manufacturing processes, especially with reference to dyes, was demoralized) there has been great difficulty in getting publishers to agree on any certain shade.

G. A. Disher of the Montreal Southam Newspapers, arose to state that it is the fault of newsprint consumers if they haven't expressed a preference for color. He really thinks consumers should say to the manufacturer: "Here is a sample of newsprint of the color we want; can you not at least approximate it?"

Mr. Link asserted that equipment and supplies and everything used in a newspaper plant have been developed to a point which is so far ahead of newsprint development that it will take years for the newsprint manufacturers to catch up. If newsprint developmental work does not materialize, the publisher cannot deliver the newspaper of tomorrow.

Joseph Oswald of the Philadelphia *Inquirer*, thinks it is an impossibility for the paper manufacturers to standardize color, for two reasons: One is water and the other is wood.

V. L. Tipka, Research Engineer, Hawley Pulp & Paper Company, stated with reference to water purity, that water can be and is filtered by the mill. He also stated all paper manufacturers are trying to improve paper.

Production Manager Albert Lengel of the Oakland (Calif.) *Tribune*, thinks excessive bleaching detracts from natural inherent strength of newsprint, to which Mr. Tipka replied: "It's not so much the tensile strength reduction as it is the abrasion to paper mill equipment."

One newsprint representative asserted the production of better newsprint which would overcome some of the objections voiced by mechanical executives from the floor would mean the use of a 33, 34 or 35 lb. sheet in place of the usual 30-31 lb. sheet.

Walter Ogden, Cleveland *Press* pressroom superintendent, was asked to explain the "explosion" of a roll recently in his plant while the roll was standing by the press. Mr. Ogden described the occurrence but no one ventured an explanation as to the cause.

The question "How can the user of newsprint utilize its pH value?" brought Albert Lengel, Production Manager of the Oakland (Calif.) *Tribune*, to his feet. He stated he asked the question for the reason he felt the time is coming when the pressman must know how to utilize the degree of acidity or alkalinity in newsprint so as to be able to get 4-color effects from 2-color plates. Newsprint is definitely acid. He discussed the topic at some length but no one offered additional information.

Hochstetter Reclaimed Paper Process

Dr. F. W. Hochstetter of Pittsburgh, discussed his paper reclamation process at the Monday night meeting. He stated his reclaimed pulp produced paper equal to that of virgin pulp. He stated no one had ever succeeded in de-inking newsprint. His process comprehends the use of books without the covers and similar paper stock.

Lengel All-Tone Process

Albert Lengel, Production Manager of the Oakland (Calif.) *Tribune*, invited all executives who cared to come, to attend a demonstration and explanation of his All-Tone printing plate in the *Bulletin* building on Tuesday afternoon.

Tuesday Morning

News Photos and Their Reproduction

Tenant Bryan, Richmond (Va.) *News-Leader*, and member of the A.N.P.A. Mechanical Committee, presided at the Tuesday morning session. The first speaker was William C. Eckenberg, Staff Photographer of the New York *Times*, who discussed *News Photos and Their Reproduction*.

Mr. Eckenberg spoke of the pride of craft of the photographer and the difficulties under which he works. He stated the engraver prefers contrasty negatives. The new films which have come upon the market are four times faster and naturally have more contrast. He also discussed the technique of developing pictures and thinks some photographers don't pay enough attention to developer control and asserted that some of them know little or nothing about chemicals. Bad results from the reproduction angle in pictures by photographers is not carelessness but is caused more by the lack of fundamental knowledge. Fine grain enlargements mean little or nothing for newspaper halftone reproduction.

Mr. Eckenberg stated the flash bulb is the greatest photographic development in the last ten years. While the flash bulb is the greatest boon to photographers he regrets to say they are flash bulb conscious. Flash bulbs should be used only when necessary. In daylight, backgrounds often are sacrificed with flashlight exposures.

Much of the success of a picture depends upon the quality of the print. Sometimes the photographer gives the engraver an exhibition print rather than one of reproductive quality.

The speaker recommended as a solution for better picture reproduction that the engraver, art director and photographer ought to get together to iron out their difficulties.

During the discussion after Mr. Eckenberg's address, and in answer to a question from the floor, the speaker stated pictures intended for reproduction in the New York *Times* gravure section are not retouched to produce artificiality. Only enough retouching is done to remove extraneous objects.

His personal preference runs to contrasty pictures.

Facilitating Air Escape From Crucible Throat When Casting Short Measure Slugs

AT THE composing room meeting of the Philadelphia A.N.P.A. Mechanical Conference, Richard Fosdick, Technical Expert for Mergenthaler Linotype Company expressed a thought not usually taken into consideration by composing room machinists when working with metal pot crucible mechanisms to put them in shape for the casting of solid slugs for resisting stereotype dry mat roller pressures.

Besides the usual close-fitting plunger in the pot crucible well, correct plunger casting stroke, proper metal maintenance, proper maintenance of metal temperature, correct lockup of mouthpiece with mold and maintenance of the crucible mouthpiece, he mentioned specifically that allowance should be made in the size of the mouthpiece vents on the right-hand side of the mouthpiece for casting short slugs.

When casting 30-pica slugs there are 30 mouthpiece jets through which the air in the crucible throat* can escape. In the case of a single-column slug, however, the same amount of air in the crucible throat must try to escape from 12 mouthpiece jets, since 18 of the jets are shut off by the left-hand mold liner.

It is Mr. Fosdick's idea that for short-measure slugs, the cross-vents in the mouthpiece should be deepened on the right-hand side of the mouthpiece to facilitate the escape of the air from the crucible throat when the slug is cast.

*This air space in the crucible throat (with the pot standing at normal position) ranges from 2 cu. in. to 5¼ cu. in. on Linotypes and Intertypes according to the machine model. It is obvious, too, that the metal pot metal level should at all times be kept at maximum height in order to reduce the cubic inch air area in the crucible throat and consequent expellation of this air through the mouthpiece jets, into the mold and out through the mouthpiece cross vents—*Editor*.

Preparation of a Newspaper Advertising Campaign

A novel feature of the Philadelphia A.N.P.A. Mechanical Conference was the explanation offered by six representatives of the N. W. Ayer & Son advertising agency of the *Preparation of a Newspaper Advertising Campaign*. Spokesman for the group of Ayer representatives who took part in the explanation was Copy Writer Kenneth W. Slifer. Of the six Ayer men who were to take part in the picture to be presented, only one was a vice president of the agency (the speaker referred to V. Winfield Challenger who is well known to A.N.P.A. mechanical executives). As an aside he stated "This is one for Ripley."

First to be introduced was Carl Bertch of the plans department. Second to be introduced and explain his part in the campaign was William Shinnick of the plans and merchandising department. Next to speak was Copy Writer William Sheehy. Associate Art Director Wallace Elton gave an explanation about the illustration development. V. Winfield Challenger then explained the preparation of plates for delivery to the publication.

The most important bit of discussion arising after the agency men had finished their presentation was that related to the placing of register marks for color plates on the outside of the ad area instead of some place inside the advertising plates. One speaker in particular stated the register marks were cut off with the balance of the waste portion of the plate when mounting the plates in chases so that it becomes difficult to register the plates.

Mr. Challenger stated he discontinued placing register marks inside the plate area because so many times after the registering operation, the register marks were not removed and as a consequence they appeared in print. He felt that the paper that does not trouble itself to remove register marks from the printing area of the plate does not deserve to receive color advertising.

Tuesday Afternoon

Tuesday afternoon offered mechanical executives present an opportunity to visit one or more points of interest to them. These consisted of trips to Curtis Publishing Company's plant, Franklin Institute Museum, Imperial Type Metal Company and Lanston Monotype Machine Company. The Lanston Monotype Machine Company served lunch to the visitors. All of the trips were well attended and the executives were enthusiastic about their reception and the things they were permitted to see.

Tuesday Evening

At the Tuesday evening meeting, W. H. Finkeldey, Consulting Metallurgist, Edes Manufacturing Company, Plymouth, Mass., presented a paper on *Engravers' Zinc*. Howard Lamade of the Williamsport (Pa.) *Grit*, presided. He was assisted by Co-Chairman Don P. Miller of the Allentown (Pa.) *Call*.

After the conclusion of Mr. Finkeldey's address and the ensuing discussion, reports of the Composing Room and Photoengraving Departmental Meetings were presented.

Engravers' Zinc

William H. Finkeldey, Consulting Metallurgist, Edes Manufacturing Company, Plymouth, Mass., discussed photo-engraving zinc from the standpoint of composition and what happens to it in the photo-engraving room. The principal qualities of a metal plate which are of importance for its use in photo-engraving are: (1) Etching quality; (2) Hardness, (3) Surface finish and (4) Freedom from dimensional changes, *i.e.*, stretching or shrinkage after heating. Another important quality usually associated with zinc is freedom from warping or buckling on heating and cooling.

The chemical composition of zinc has a profound effect on its etching qualities. Composition affects the character of the etched surface, not only from a purely chemical standpoint but also because of its effect on the internal structure of the metal itself, which in turn influences etching. Ordinary commercial photo-engraving zinc is not pure zinc but really a metal alloyed with small amounts of lead, cadmium and iron. These last three metals are not deliberately added by the manufacturer, but occur as natural impurities in the so-called "common" grades of zinc. Lead, cadmium, and iron, in various mineral forms are associated with many of our common zinc ores and are carried over in the zinc smelting process to the metal itself. While in a sense they are impurities, they should also be considered as alloying ingredients, since the lead, cadmium and iron content of the zinc metal play a very important part in determining its properties from a photo-engraving standpoint. The commercial grade of ordinary photo-engraving zinc will contain from 0.25 to 0.30% of lead, from 0.15 to 0.20% of cadmium, and from 0.01 to 0.025% of iron.

Lead—Lead performs a useful function in controlling certain structural changes which take place in the metal, but, at the same time, it can be a considerable detriment to good etching qualities if it is not finely and uniformly disseminated throughout the zinc.

Iron—Iron in small amounts below 0.01%, is also useful. It imparts hardness to the zinc. When the iron content is low, these particles of iron-zinc compound are so small in size and so finely disseminated throughout the metal that they have no detrimental effect on the etching quality. When the iron content is above 0.025%, the particles tend to coalesce and become much larger in size, and cause roughening of the etched surface.

Cadmium—The third metallic impurity, cadmium, is completely dissolved in the zinc and is not visible in the microstructure as a separate constituent. It gives zinc certain necessary strengthening qualities, permitting the metal to be cold-rolled with sufficient hardness to satisfy the ordinary demands of a photo-engraving plate.

Internal Structure—The internal structure of the metal has a pronounced influence on etching. The original, large sized grains in the casting are broken up into fine fragments during the cold rolling procedure, but, when the metal is heated high enough, these grain fragments rearrange themselves, under the influence of the heat to form a new grain structure entirely different in appearance.

All zinc plates, when heated to the temperature required to burn-in the hot top enamel, recrystallize and grow these new grains. But, if the plate is of the proper composition and structure and has not been overheated by the photo-engraver, the grains will be so small that the difference in level of the individual grains after etching will be too slight to catch the powder. The grain size of a satisfactory plate after recrystallizing in the heating process is about 0.002 in.

Etching Speed—So far, our tests have never shown that the composition of the rolled zinc has any material effect on its etching speed.

A New Alloy

During the last few years, the speaker has made a number of experiments in the plant of one of the producers of photo-engraving plate, with the object of improving the etching qualities of zinc and developing other desirable properties as well. Realizing that lead and iron were undesirable impurities, it was decided to start with the purest grade of zinc obtainable—99.997% pure. Metal of this composition is entirely too soft for any use in the photo-engraving process and, furthermore, does not have the correct etching qualities. After trying a large number of different compositions, an alloy was finally developed by adding three other metal ingredients to the zinc. This alloy has etching popertties far superior to the ordinary commercial engraving zinc and in addition it has a hardness very close to copper.

Since the lead and iron content of this alloy are very low, no difficulty is encountered with roughening of the etched surface even at great depths. In fact, this metal etches with the same smooth surface, from the face clear rhrough to the back.

HARDNESS OF ZINC PHOTO-ENGRAVING PLATES

Material	Before Heating	After Heating
New Hard Alloy, A..	88-90	83-84
Hard Zinc, B.....	85	68-70
Commercial Grade, C	73-75	50-52
Commercial Grade, D	65-67	48-50

Fig. 1

Hardness

The hardness of a rolled zinc plate depends upon its composition and its structure. The structural changes which occur when the plate is subjected to the various heating treatments involved in the photo-engraving process have a pronounced effect upon the hardness of the rolled metal plate. The accompanying table gives the Rockwell hardness of rolled, No. 16 gauge, photo-engraver's zinc plates of various compositions, both before and after heating to 600 deg. F.

(*Continued on Page 30*)

TABULATION OF PERMANENT DIMENSIONAL CHANGES PRODUCED BY HEATING

Material	Test Direction	Dimensional Changes in 70-in. Length After Heating 4 Min. to Temperatures Indicated. Results Reported in Thousandths of an Inch.					
		250 deg. F.		350 deg. F.		600 deg. F.	
		1st Heat	2nd Heat	1st Heat	2nd Heat	1st Heat	2nd Heat
Regular.....	With Grain...	+.0031	+.003	+.01	+.001	+.0143	+.003
Zinc.....	Across Grain..	+.0007	+.001	+.0025	+.0005	+.004	+.0017
Hard.....	With Grain...	+.002	+.0013	+.0131	+.0016	+.018	+.0125
Zinc.....	Across Grain..	+.0005	+.0007	+.0031	+.0012	+.0038	+.003
New Hard.....	With Grain...	+.0003	+.0002	+.0093	+.001	+.0157	+.0013
Alloy.....	Across Grain..	−.001	−.0005	+.0063	−.001	+.0037	+.001

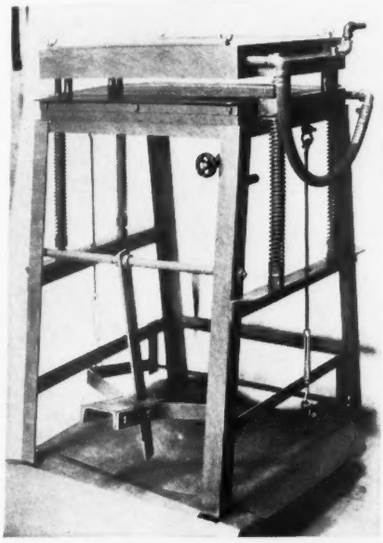
Fig. 2: + sign indicates expansion; − sign indicates shrinkage. "With grain" test measurements are parallel to, and "Across grain" test at right angles to the rolling direction. Dimensional changes determined on a 10 in. length. Test specimens cooled to room temperature after heating before measurements made.

Equipment - Supplies

Fletcher Photo-engravers' Plate Cooler Press

During the course of an address before the A.N.P.A. Mechanical Conference in Philadelphia, William H. Finkelday, Consulting Metallurgist of Edes Manufacturing Company, discussed engravers zinc. Included in that address was a description of the Fletcher plate cooler press, invented by Fletcher R. Edes and Mechanical Superintendent Frank Martin, both of Edes Manufacturing Company.

The particular machine shown in this illustration is the original model. Harold T.



Burns of Edes Service Department, states the machine has now been streamlined and improved in appearance.

Mr. Finkelday stated that copper, and the harder grades of photo-engraving zinc do not respond as readily to the forcible slapping down upon a hard surface to straighten the plate as is the case with the ordinary commercial grade of photo-engraving zinc. The cooler press illustrated here was developed for straightening plates warped or buckled in the photo-engraving process because of uneven heating or cooling.

Two cast iron water-cooled platens are kept in open position by heavy springs and can be closed down upon the plate by depressing a foot treadle. Suitable guides keep the working surfaces of the platens in perfectly parallel relationship as the press is closed.

The top platen, weighing several hundred pounds, is heavy enough to flatten instantly even a badly warped plate so that cooling takes place simultaneously over every square inch of the top and bottom surfaces of the plate.

The machine, however, is not recommended for use between powdering operations because the powder would stick to the upper platen.

Ludlow Shell-Hi Slug Shear

The Ludlow Shell-Hi Slug Shear has been designed by the Ludlow Typograph Company to shear the shank from the head of Ludlow slugs.

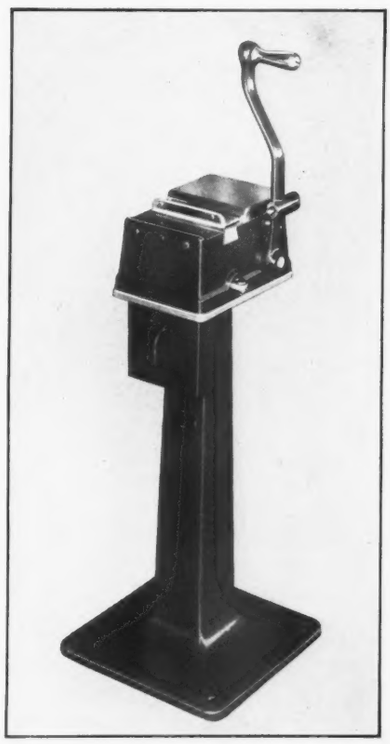
The shell-high slug-heads may be cemented or tacked in any desired position on base material 0.765 in. high. By using shell-high display lines and price figures, newspapers and specialty printers can make late price changes, corrections, insert angular type lines, and add signatures to plated advertisements without mortising type-high material.

For sheared slug-heads which are to be tacked onto base, there are available special high-space matrices equipped with pints which cast tack-holes in the slug-head.

In using this machine, the operator first moves the operating lever backwards, which pushes the sliding stripper-plate back and uncovers the knives. The slug is then inserted between the knives.

The operator pulls the operating lever forward and downward toward a horizontal position, whereby the shank is sheared from the head of the slug and the slug-head stripped from the knives. The detached slug-shank falls into a container. On the return stroke of the operating lever, the stripper-plate cleans the knives with a felt wiper attached to the under side of the plate.

A pedestal base, 16 in. square, supports the main housing in which all operating parts except the operating lever are enclosed. Height



of the machine is 36 in. (not including lever) and it weighs 154 lbs. The knives which shear either 6 or 12 point slugs, are made of cutlery steel, hardened and ground. The front knife is stationary; the movable rear knife is mounted on a swinging arm, actuated by the operating lever through a hardened and ground cam and roll. Permanent stops are ground on the knives to prevent the cutting edges from striking each other, and the knives are guarded and covered by the stripper-plate when the handle is in the normal or vertical position.

Descriptive literature and full information about the Ludlow Shell-Hi Slug Shear may be secured by addressing the Ludlow Typograph Company direct.

Riehl Galley Locks

The Riehl Galley Locks are designed to hold type composition securely in the galley. The locks are made from Swedish spring steel. A bow-type lock is used for the foot of the galley and a loop-type lock for placing alongside type matter. Obviously, the purpose of the locks is to eliminate string which is used for tying up type matter. The locks are made in various lengths to hold type in any size galley. Sizes range from the No. 0 News

Riehl galley locks. A bow-type lock is used at the foot of the galley and a loop-type lock with corrugated free ends is used alongside furniture or reglet for locking the side of type matter in the galley.

which is 2½ in. to the No. 5 News which is 10½ in. long. Job sizes range from 6 in. to 12 in. length. Side locks range from 8 in. to 24 in. Special size galley locks will be made to order.

New Poster Tints

Tests for permanency of IPI's new poster tints were conducted in outdoor laboratories in Oakland, Chicago, and New York recently. The new tints, for both indoor and outdoor poster use, are exceptionally fast to sunlight, moisture, and other elements. The tints are the result of a comprehensive study of the problems affecting the use of this type of color, and the line is said to be the most complete ever developed.

A great many pigments tested were unsuited for posters, but a list of 42 was found to be well adapted for outdoor work, and 50 were suitable for indoor use. These have been made up in standard formulations. Pigments of high cost were eliminated wherever possible in favor of less expensive materials.

Technicians at the IPI Products Development Laboratory knew that artificial light fading machines which simulate sunlight, were not sufficient for testing poster colors since they do not measure outdoor weather conditions accurately. Poster tints may be affected not only by sunlight but by rain, mists, dust abrasion, and smoke. In addition, fading machines affected some pigments more than actual sunlight; others were less affected by the artificial light. Therefore, tests were made out of doors to make sure that the results would be accurate. Tints were exposed in three sections of the country to take into account a variety of atmospheric conditions.

Outside posters are rarely printed on coated

paper, so for the purposes of these tests, these tints were reproduced on super paper. Indoor tints, however, may be printed on either coated or uncoated stock, and in testing these colors, proofs taken on both super and enamel papers were used. Broadly speaking, coated stocks are alkaline in character and uncoated stocks are acidic. So a check for permanency on each type is important.

Center Control Fork Type Truck

A compactly built truck of the center control fork type is the F-16 rated 6000 lbs. and built by the Elwell-Parker Electric Company. This truck is a companion type for a similarly rated truck but with rear end control formerly described in *Printing* EQUIPMENT *Engineer.*

The F-16 is built either as a telescoping or non-telescoping truck for inside car work or high tiering of pallet loads in the warehouse. It may be fitted with a fork of two prongs to be thrust beneath metal or wood load carrying pallets or with a single or double ram for insertion in coils or circular ring type packages or unit loads. Forks and rams are made of various lengths and spacings to accommodate loads.

The operator's station amid-ship affords unobstructed vision of the fork tips when load is being picked up or placed.

The frame is a box-like formed plate all welded structure with fixed full floating axle and non-steered wheels fitted with solid rubber tires.

Enclosed drive motor is mounted on axle driving through spiral and spur gears on anti-friction bearings, all carried and adjusted in differential pot cover.

Fork hoist is fitted with slip clutch for protection against excessive overloads or accidental thrust of load forks under immovable loads while an overrun ratchet device protects hoist and chains if load forks are lowered against obstruction. In addition an electro-mechanical brake holds the load at will of operator and hoist generator motor is designed to provide for regenerative function of returning electric current to battery when lowering loads from stacks.

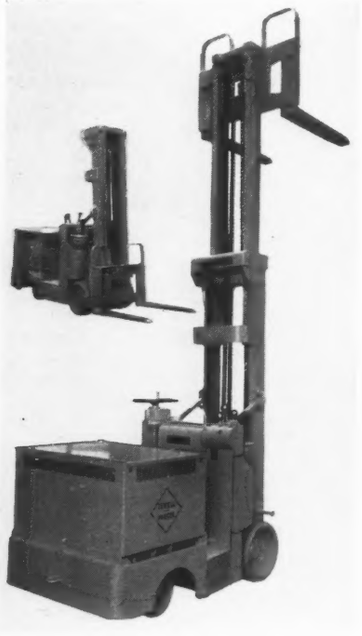
Trail axle is steered by horizontal back geared hand wheels. Travel hoist and tilt controllers are enclosed and mounted on dash convenient to operator.

Travel controller is self returning to neutral and will be furnished hand or foot controlled and with dynamic brake feature for electric braking on ramps.

Operator's comfort is considered in that pedals are covered with pebble-top hard rubber faced sponge rubber pads.

Truck may be fitted with interchangeable lead or alkaline battery, or gas-electric unit as power sources.

Elwell-Parker, 500% overload, heavy duty and high torque motors. No fuses are used in power circuits. Pressure greasing fittings provided.



C&G Sawliner

Milwaukee Saw-Trimmer Corporation has announced the C&G Sawliner, a saw-trimmer for composing room use. The new model is in the lower priced field and may be had with or without the cabinet shown in the illustration. The cabinet can be furnished mounted on wheels for use in the ad alley. The saw housing is built of fabricated steel for strength without weight.

The Sawliner Bench Model is equipped with a ¼ h.p. a.c., 60 cycle, single-phase motor, although motor equipment other than specified above can be supplied. A 72 pica gauge, workholder and one Trimosteel saw blade are standard equipment. Trimosteel saw blade saws and miters without trimmers and will cut composing and stereotype metals and wood. The workholder permits short-measure sawing, has clamping capacity of 6 in., and is instantly removable when sawing plates.

C & G Sawliner may be had with or without cabinet.

Mitreing equipment, including miter gauge and right-and-left-hand miter vise can also be supplied.

The saw is designed in such a way that practically all the chips fall into a waste drawer underneath the work top. Motor, V-belt drive and saw spindle completely enclosed and easily accessible underneath the hinged work top.

The bench model (without cabinet) measures 27¼ in. by 17 in. by 9½ in. Cabinet model, height from floor, is 27½ in.

P-Double-E File No. 1Z.

Typecast Telephone Cuts

A new line of typecast telephone cuts has been announced by American Type Founders. The line includes four sizes of hand or "French" phones, with and without dials, and four sizes of desk or "upright" phones, with or without dials. Included are cuts of telephone users for one or two-color printing.

These cuts may be had individually or in a special package. Five different assortments are offered. A specimen folder showing the complete line and a few "use" examples may be obtained from American Type Founders.

Rubber Plate Machine

American Type Founders, in announcing the ATF Precision Rubber Plate Machine, claims the average rubber plate made on the machine can be produced, mounted and ready for printing in slightly less than 30 min. The machine has been announced in two models: Model 14 x 14 with pressures up to 50 tons, and the Model 18 x 18 with pressures up to 75 tons.

Features of the machine are: Timing clock signals operator when plate is finished; heat of each platen is controlled separately by thermostats with illuminated dials; illuminated instrument board; all working parts accessible at front; fingertip pressure control; oversize head ram and cylinder made of tough alloy steel; substantial steel plate side frames.

Specifications for each of the two models are:

Model 14 x 14: chase size (outside measurement) 13¾ x 14 in., form size 10¾ x 12 in. ram diameter 10 in., height 63 in., height to top of apron 42 in., width of apron 25 in., apron extension 7 in. beyond front of base, floor space 22 x 36 in., shipping weight 3400 lbs., motor ½ h.p. current rating 4.8 k.w.

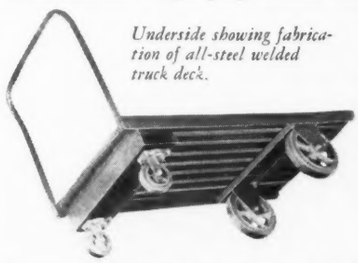
View of ATF's Rubber Plate Molding Machine

Model 18 x 18: chase size (outside measurement 17¾ x 18 in., form size 14¾ x 16 in., ram diameter 13 in., height 63 in., height to top of apron 42 in., width of apron 27 in., apron extension 9 in. beyond front of base, floor space 22¾ x 36¾ in., shipping weight 4400 lbs., motor ½ h.p., current rating 6.2 k.w.

P-Double-E File No. 2F3.

Clark Steel Weld Trucks

The deck of the Clark Steel Weld Truck, announced by All Steel Welded Truck Corporation, is a perfectly smooth surface. The sides of the deck are turned down 3 in. The corners of the deck are rounded. The underside of the deck is of 6-channel construction to permit the use of light-gauge material and still prevent deck sag under any normal load. Electric welded fabrication, states manufacturer, practically eliminates possibility of the deck coming apart. The new steel truck is adaptable for use with Clark Lift Jack or as a flat truck. Roller-bearing semi-steel or rubber tired wheels with pressure grease fittings are furnished regularly. The truck is



Underside showing fabrication of all-steel welded truck deck.

made in all standard sizes, in tilt and non-tilt types.

Decks are made of 10, 11 or 12 gauge steel. Standard sizes range from 24 in. by 48 in. to 40 in. by 72 in. Wheels range from 9 in. to 18 in. Casters range from 6 in. to 10 in.

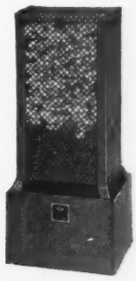
P-Double-E File Nos. 1DD, 2G37 and 4D.

Aqua-Sorber Dehumidifier

Aqua-Sorb Company, in announcing several models, states the Aqua-Sorber is a portable unit designed and constructed to dehumidify the air in paper storage and processing rooms, and rooms in printing plants, including offices. The Aqua-Sorber, states manufacturer, will filter efficiently the air treated, removing dirt, dust and pollen. It will remove up to 75% of the humidity from the air treated. The principle of this device is that moisture is removed from the air by a hygroscopic absorptive material called Aqua-Sorb which dissolves slowly and may be replaced inexpensively.

One of the models, known as HB-100, consists of a metal cabinet equipped with a centrifugal exhaust blower mounted in the upper part of the unit and automatically controlled by a humidistat which can be set at the relative humidity desired. In the bottom of the unit is a grilled opening through which the air is drawn and moisture extracted from the air is descharged into a drainpipe or removable catch-basin. On the grill is a specially prepared filter bed upon which is placed a charge of Aqua-Sorb, a highly moisture-absorbent material. When exposed to moist air Aqua-Sorb deliquesces and slowly dissolves to form a brine. This brine, highly concentrated at first, trickles slowly down through the filter bed, absorbing more moisture from the incoming air and becomes progressively more and more diluted until it finally runs off through the bottom opening. On this Model HB-100, 100 cu. ft. of air per minute is delivered at 25% relative humidity. Size of Model HB-100 is 15 in. by 15 in. by 44 in. high.

Below—Aqua-Sorber Dehumidifier with cabinet. Removes 75% of humidity from air treated.



Principle of operation of Model Jr-40 is similar in other models but operation is non-mechanical.

The Model Jr-B-40 is similar in construction and operation to the model HB-100 described above except that its capacity is smaller. In the top of the casing is mounted a small blower for speeding up the action of the unit when found necessary.

The principle of operation of the Model Jr-40 is similar to that of the two models described above but its operation is non-mechanical. It is designed for use in restricted areas where definite control is not necessary but where prevention of dampness and condensation is desired.

P-Double-E File No. 8A.

Grout Newspaper Counter

Scripps-Howard Supply Company states the Grout Newspaper Counter, or Counter Actuator, is a device for recording an accurate count of newspapers delivered to the mailing department from the pressroom. In many newspaper plants, the problem exists wherein it is impossible to check the number of papers claimed to have been delivered by the pressroom to the mailing department with the number of papers claimed to have been received by the mailing department from the pressroom. The dispute in the number of papers actually delivered may be caused by imperfect copies at the start of the run, press stoppages due to color setting, makeovers, splices, web breaks, etc.

By referring to the accompanying diagram, it will be seen that the Counter consists of a contactor *A* attached to the conveyor column *E* by means of clamps *D* and driven by a chain *B* from split sprocket *C* mounted on any driving shaft of the conveyor. The contactor *A* runs in synchronism with the press delivery fan, *i.e.*, when a paper is delivered to the conveyor belt an electrical contact is made in the contactor *A* at the same instant. If the press is equipped with an 8-pocket fan delivering eight papers to the conveyor belt for each revolution, then the contactor also makes eight electrical contacts for each revolution.

Mounted upon the contactor box *A* is an adjustable arm *J* so arranged that when it is in one position it contacts for each fan pocket delivery, and when it is in the other position, it contacts for every second fan pocket delivery. The latter position is employed only when a collect paper is run from the press using only half of the fan pockets for delivery.

Used in conjunction with this contactor and connected electrically (circuit *K*) in series with it is a control switch *F* mounted on the side of the conveyor and extending back of or front of and between two of the conveyor cables in such position so that no paper can travel up the conveyor without lifting the series of light feelers *G* attached to the sides of the switch box *F*.

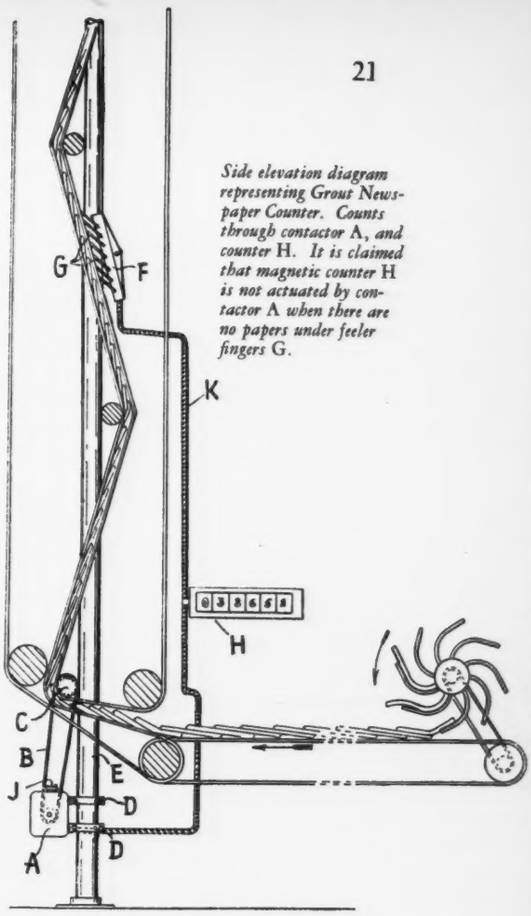
The function of control switch *F* is to prevent electrical impulses passing from contactor *A* to magnetic counter *H* when there are no papers behind the control switch or when a gap in the stream of papers passes this point. The control switch being in its open position when one or all of feelers *G* are in their outermost or normal position, the switch will not be in its closed position to allow electrical impulses to pass to the magnetic counter *H* until all the feelers are lifted by the stream of papers passing upwardly in the conveyor.

The distance between the extreme end feelers on this control switch is approximately the length of one folded paper less the amount of the lap of the papers. In other words, the control switch allows only one electrical impulse to pass from the contactor to the magnetic counter when only one paper passes behind it.

Sprockets are furnished to drive the contactor at the proper speed with respect to the press fan.

Additional magnetic counters can be furnished to be placed in different locations, such as the pressroom superintendent and the circulation manager's offices, as well as on the press near the brakeman.

P-Double-E File No. 5HH.



Side elevation diagram representing Grout Newspaper Counter. Counts through contactor A, *and counter* H. *It is claimed that magnetic counter* H *is not actuated by contactor* A *when there are no papers under feeler fingers* G.

Extra-Range Display Linotype

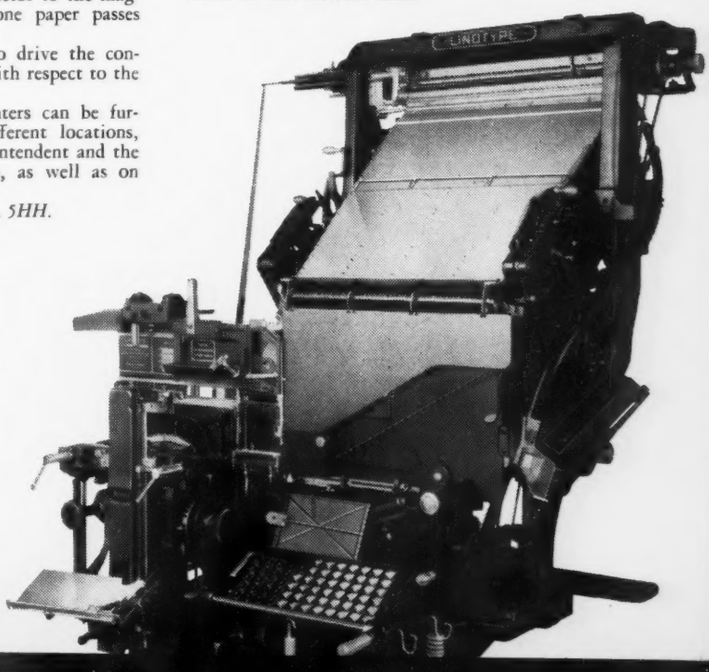
The Mergenthaler Linotype Company announces a new Blue Streak model, the Model 33 Extra-Range Display Linotype.

The new machine accommodates four 72-channel Linolite magazines that are 35% wider than regular 72-channel magazines and that make it possible to compose type faces up to and including normal-width 36 points.

It is now possible to set from 72-channel magazines, and speedily, type faces that formerly could be run only in Linotype 55-channel main magazines or in 34-channel auxiliary magazines and often necessitated the use of sorts trays.

The four magazines may be short ones (with twelve matrices to the channel), each with its own entrance, or may be full-length, as desired.

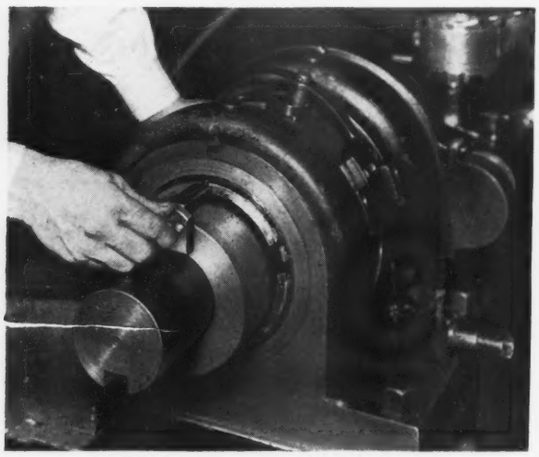
Because of their light weight and the in-built quick-change mechanism, the magazines are easy to change. Magazines are shifted from one operating position to another by means of the one-turn shift.



Model 33 Linotype. Carries four 72-channel magazines accommodating matrices up to and including normal width 36 point faces.

Tubular Plate Matching Unit

For double-page spreads and color work on tubular rotary presses, American Publishers Supply announces the Lowe Tubular Plate Matching Tool for undercutting and beveling stereotype plates. The tool is affixed to the boring shaft of the Duplex plate finishing machine and is fed into the revolving plate to cut a 60 deg. clamp bevel underneath the printing face of the plate approx. ¼ in. deep. This undercutting operation leaves an overhanging printing surface ⅛ in. thick. Beveled steel rings supplied with the device support the arch or overhanging portion of the plate solidly on the press cylinder. Sponsor states the rings prevent the printing surface of the plate from depressing because of accidentally thick cylinder wraps or other stresses. The steel ring also prevents a plate section slipping over the margin bar, the usual noisome slapping is minimized and the possibility of a middle section of a three-piece double-truck assembly climbing and punching is eliminated.



View of Lowe Tubular Stereotype Plate Matching Unit being used to undercut a tubular plate on Duplex Plate Finishing Machine for double-page spreads or color plates. Device is affixed to boring shaft. When the plate revolves, the tool cuts a 60 deg. bevel underneath face of the plate ¼ in. deep and leaves the printing surface of the plate projecting ⅛ in. thick which is said to be of sufficient strength to resist accidental cylinder wraps or other stresses.

Kut-Lox Cut Mounting Units

The Kut-Lox System for holding plates to bases has been announced by The Challenge Machinery Co. The inventor is Randolph Langseth, of the Muskegon (Mich.) *Chronicle*.

The system employs one basic unit in two sizes, 3 picas by 3 picas (A) and 3 picas by 6 picas (B). Each unit is a piece of Challenge Sta-Rite Newspaper Base with two sharp steel pegs about the size of small brads projecting above the surface.

In use, one or more Kut-Lox units are inserted in the base makeup, the cut is laid in

A B C

The Kut-Lox Unit at left (A) is 3 picas by 3 picas; unit B is 3 picas by 6 picas; Guard C is for holding 16-gauge or similar plates to bases. These units may be used with any cut basing system. Pins in units A and B enter cut and hold it in position on base while proofing or molding in stereotype department.

position and gently tapped down with planer and mallet. The pegs enter the soft underside of the plate and hold it during proofing and mat molding. The plate may be removed or changed readily.

The Kut-Lox System is made to the standard 0.759 in. height and can be used with any system of base. With Kut-Lox units inserted at the time the ad or form is made up, correct positioning is assured, both before and after proofs are shown. Interlaying can be done in the usual manner.

Kut-Lox Guards (C) are furnished for holding 16-gauge plates. These are small hooks projecting from a 3 by 3 pica base, 0.853 in. high. The hooks are just under type-high, and one on either side of the plate is generally sufficient to hold it.

Routomatic Curved Plate Router

Sta-hi Corporation has announced the new enclosed Routomatic Curved Stereotype Plate Router. The routing mechanism is enclosed by a heavy steel housing with the exception of the hand wheel controls, counterbalanced foot pedal, push-button electrical controls and pilot light signals. Router chips drop into a hopper leading to a removable metal drawer at the lower front part of the machine.

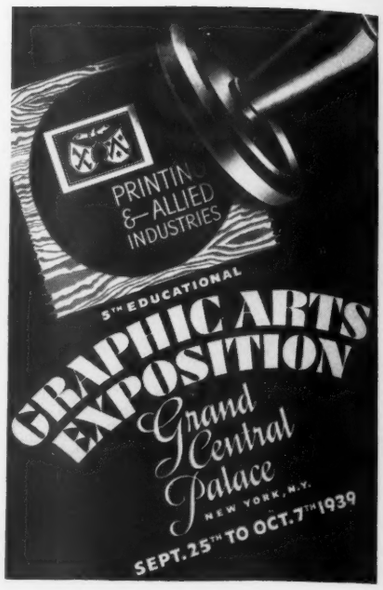
Operating features are as follows: The entire front folds over the top of the machine, leaving a large opening to permit the operator to put plates on or take them off the ball bearing routing cylinder.

A safety glass front containing shatterproof glass window may be pushed up into

Routomatic Curved Stereo Plate Router

the top guides. A safety latch holds the front in top position.

Reflected interior lighting provides clear view of the work by the operator.



A large screen is provided for holding copy directly above the glass front so the operator can follow the work without eye-strain or neck-craning. Copy holder folds back out of the way with the window.

For rapid stripping of plates for spot color, the right and left-hand motion of the tool steel ball bearing router head is motor-driven. Main drive to the head is powered by a 1 h.p. ball-bearing motor. A low-speed ball-bearing motor drives clutch control for power feed on the screw.

Other features are: Built-in tool drawer; foot pedal is counterbalanced for light pressure and a multiplied device enables operator to keep heel on the floor, machine is completely ball bearing equipped. *P-Double-E File No. 2G31.*

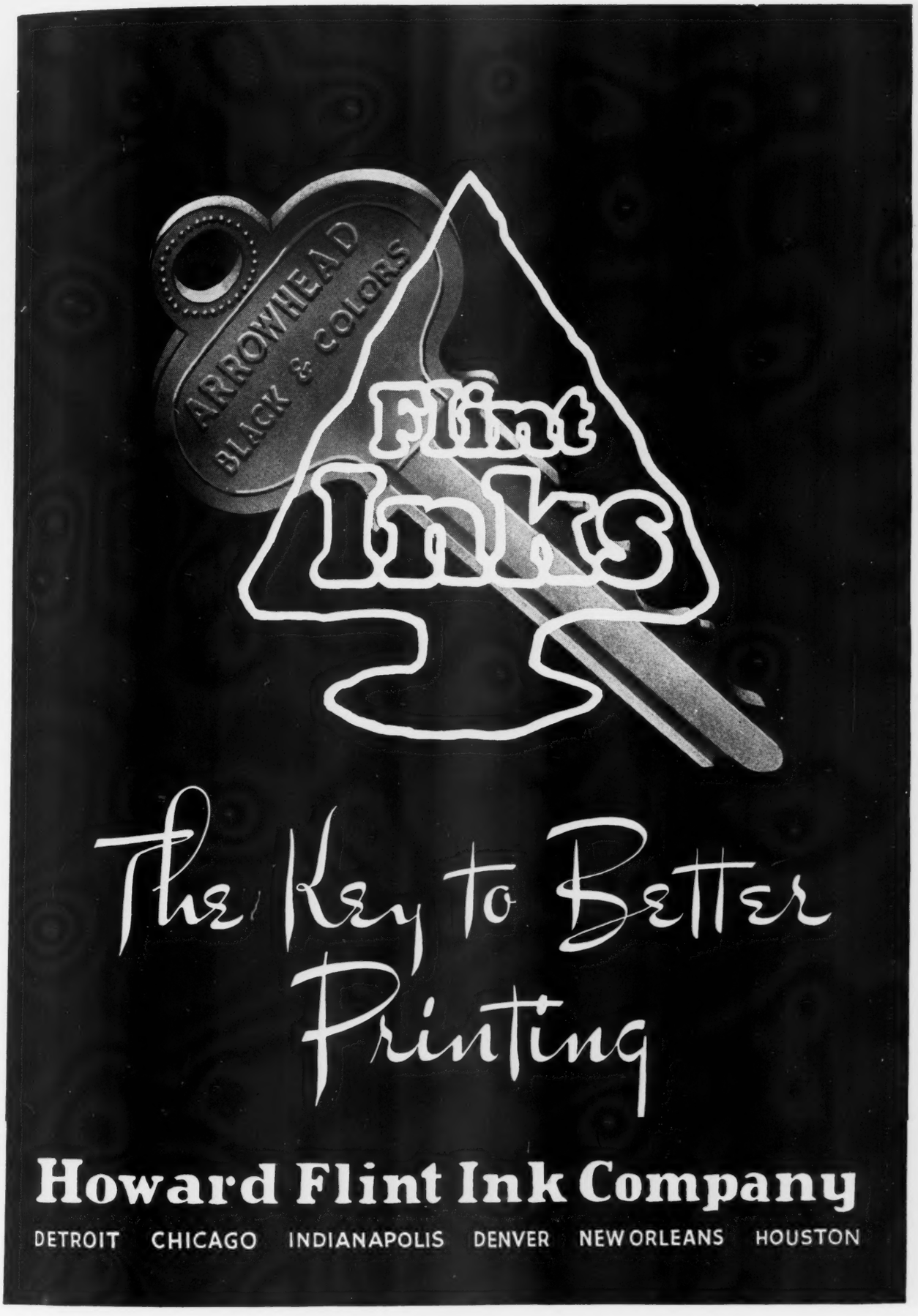
Monotype Closed During Vacation Week

During vacation week, August 7th to August 12th inclusive, the offices and factory of the Lanston Monotype Machine Company, Philadelphia, will be closed. During that week a skeleton force will be maintained for the purpose of handling emergency orders for replacement matrices and machine parts. Telephone service will be maintained and the offices will be open for receiving telegrams and correspondence. The company is asking Monotype users to cooperate by anticipating requirements by sending routine orders to the company as early as possible in advance of vacation week.

Star Line-casting Machine Metal Pot

The Star Electric Metal Pot, announced by Linotype Parts Corporation, is intended for application to Intertypes and Linotypes. The crucible is made of tempered aluminum alloy. Manufacturers state 37 minutes are required to heat the pot ready for casting. Metal capacity of the crucible is reduced considerably so that minimum current will be consumed in maintaining casting temperature of the metal. The claim is made that the smaller metal capacity of the crucible does not limit line-slug production because the pig is suspended above the pot crucible heating element which melts metal from the pig as rapidly as required to maintain the metal level in the crucible.

The pot crucible well consists of a cast iron alloy sleeve which is screwed into the aluminum crucible. The well sleeve is interchangeable with new ones for replacement when the plunger and well sleeve become worn so as to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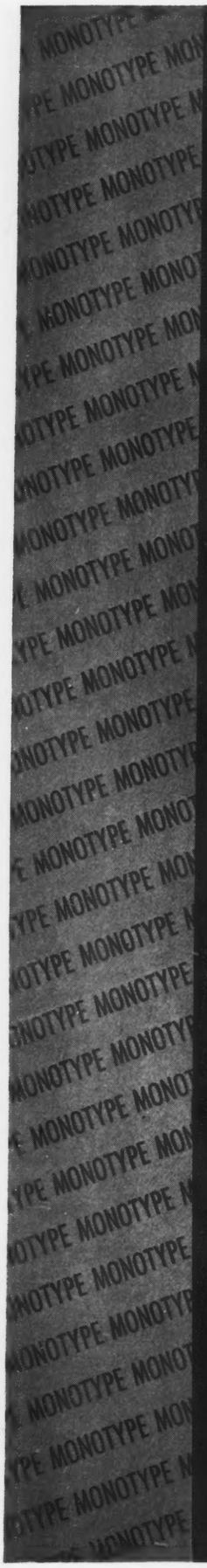
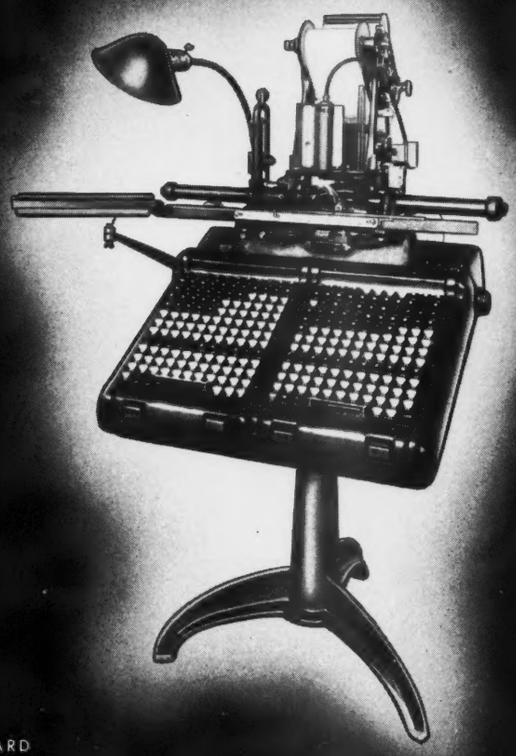




MONOTYPE KEYBOARD

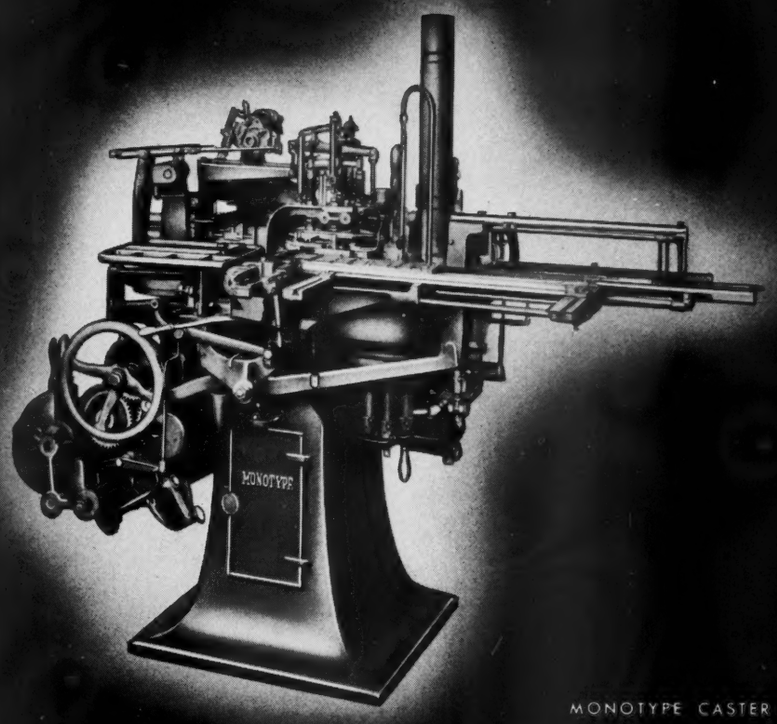
The Monotype Is More Than a

IT ALSO MAKES TYPE

The Monotype has a wide field of profitable use as a type-setting machine, and in addition makes hand compositors more efficient and printing plants more profitable by providing a practically unlimited supply of type and materials. It saves time spent in type distribution and betters the quality of printing. Only in the Monotype is combined a type-setting, a type-casting and a strip-casting machine, all in one—no other type-setting machine has so wide a scope of service to buyers of printing.

TYPE-SETTING—*The Monotype Type-Setting Machine* sets type in measures up to 60 picas wide in all sizes from 4 to 18 point. Straight matter, tabular and intricate work, ruled forms, rule-and-figure work—in fact, all kinds of composition—are done with unequalled adaptability and speed.

(Composed in Monotype 20th Century Series and Monotype Swing Bold)



MONOTYPE CASTER

Type-Setting Machine

and MATERIAL *for* HAND COMPOSITION

TYPE-CASTING—*The Monotype Display Type Attachment* enables the same machine to cast new and perfect type, spaces, special characters and decorative material in all sizes up to 36 point. More than 3,000 faces and sizes of type are available for casting on the Monotype. These include many original faces by Frederic W. Goudy and Sol Hess, English Monotype faces and most of the modern types in general use by printers and typographers.

STRIP-CASTING—Equipped with *Lead, Slug and Rule Molds* and the *Cutter Attachment* the same Monotype casts rules from 1½ to 12 point—in continuous strips or automatically cut to all labor-saving measures to 25 inches.

Write for Complete Information

LANSTON MONOTYPE MACHINE COMPANY

MONOTYPE BUILDING, TWENTY-FOURTH AT LOCUST STREET, PHILADELPHIA, PENNA.

Paper Problems

By LETTER P. OFFGRAV*

Am I all wet when I make the statement that in the rush and crush for production these days there must be additional heat applied for drying when the paper machines are speeded up—causing one side of the sheet to be in a sense burned, making it smaller than the reverse side and naturally curled as the curl is always down when we receive it?"

**Another in a series in response to problems propounded by mechanical and production executives in a questionnaire sent out by* Printing EQUIPMENT Engineer. *Mr. Offgrav will reply to additional problems in future issues.*

SORRY, but your statement is, as you put it, "all wet." The drying operation on a paper machine is such that both sides of the sheet receive the same amount of heat. The web in drying passes over a long series of steam heated drums, with the two sides alternating in their contact with the drums. It is obvious, therefore, that speeding up the machines does not result in one side of the paper being burned.

View of Star Electric Metal Pot for line-composing machines. Pot rests upon platform, from which it may be removed, leaving platform and legs in the machine. Entire operating mechanism is contained in this assembly.

permit metal to escape between the parts as the plunger makes its casting stroke.

The pot crucible mouthpiece is made of cast iron alloy to which, it is said, a minimum amount of line-slug metal will adhere.

The outside pot casing or jacket is made of stainless steel. The pot itself rests upon a platform which in turn is supported by two pot legs of conventional size and shape. When it is desired to take the pot out of the machine, it is removed from the platform.

The pot is a self-contained unit with complete control mechanism mounted on the outside as shown in the illustration. Two dials are used. One of these is calibrated so that the desired metal temperature in the crucible is set by turning a knob. The other is a 6-way switch that turns the pot *on* and *off* and regulates the mouthpiece temperature by four heat settings. When the pot is *on* a colored light indicates the fact.

Three cartridge type or cylindrical heating elements are employed. These are inserted in integrally cast pockets in the aluminum crucible. One is the mouthpiece heater. The other two which are alike, are crucible heaters. All three heaters lie horizontally in the crucible pockets and terminate at the outside left pot elevation. The two pot crucible heaters are individually controlled by thermostats, so that the second heating element is brought into use automatically when the metal temperature drops below the minimum temperature setting. In the average operation of the pot the second heating element will be *off* most of the time. Of the two pot crucible heating elements, the one which goes *off* last is so placed in the crucible that the ingot or pig of cold metal which replenishes metal in the crucible rests just above it.

It is said the heating elements will take a much higher load than they ever will be subjected to and they cannot burn out through overheating because of a thermal fuse which breaks the electric circuit should there be failure of the thermostatic controls.

The pot crucible thermostatic control, it is claimed, will hold a pre-set temperature to within 1 deg. C.

Two controls are in use, one controlling the main heater under the pig, the other the crucible heater below. The thermostat consists of three units. The first is a thermostrip fastened to the outside crucible wall; the second, a small, simple micro-switch, and the third, a loose rod of steel.

The thermostrip is a combination of two unlike metals, which, when subjected to heat will curl up. As the temperature of the metal rises, the end of this bi-metallic strip curls toward the actuating rod, pushing it outward to contact a sensitive micro-switch (which has a movement of three ten thousandths (0.0003), to cut off the current.

For example, if the pot temperature is set at 525 deg. F., and the temperature of the metal should rise just above this point, the thermostrip will establish contact with the actuating rod, instantly cutting off heater. A fall in temperature will, of course, reverse the process.

When the pot is first turned on both heaters will operate. When the secondary heater reaches a lower temperature differential it cuts off, and the main heater continues to operate until the maximum temperature has been reached.

For example, if the pot temperature is set for 525 deg. F. the secondary heater may be set (at the factory) to cut off at 5 deg. less. The main heater continues to operate until 525 deg. heat has been reached.

A receptacle switch is provided in the pot so that a special pyrometer may be plugged in to obtain an instant temperature reading of pot and mouthpiece.

Linotype Parts Company states tests show that when the pot is heating up and both the pot and the mouthpiece heaters are on *"high,"* the current consumption is 1450 w. With the secondary heater *off* and the mouthpiece heater on *low*, current consumption is 650 w. With the secondary heater *off* and the mouthpiece heater on maximum *high*, current consumption is 900 w. During pot idling time 310 w. per hour are consumed. The pot uses 15.4 w. for every pound of metal cast.

RIGHT OF WAY
is *Yours* at CHAMPION

IN its vast sea of mill operations, Champion allows no paper order to run down and sink another. Along with absolute adherence to high standards of quality for every grade, Champion insists upon fair treatment and good service to all, irrespective of size. No lesser policy ever made a mill great, and only a great mill can maintain such a practice.

The Champion line includes enamels, uncoated, offset, envelope, bond, mimeograph, ledger, board, postcard, tag board, covers, specials, and many others. Your customers' needs are many, their demands exacting, whether they buy fine brochures or short-lived throwaways. You can do better work for all of them when you use Champion Paper.

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Chemistry

Played great part in speeding up printing production by developing high-speed inks—Non-scratch inks, gloss inks and resistance to deteriorants also among recent developments.

By GEORGE WELP*

CHEMICAL research is greatly responsible for the revolution in speeding printing production in the Graphic Arts. It has contributed the astonishing advances in the field of ink making since its humble beginning as a few pounds of soot which Gutenberg ground in linseed oils by hand. Today the Graphic Arts industry ranks as the sixth largest in the United States, employing over a quarter of a million wage earners and paying them some $400,000,000 a year.

Many of the same methods are being used to speed the production of mail order and other catalogs, bags, labels, packages and containers, and commercial printing of all kinds as are being used in publication printing. It is now possible to feed the printed material directly into folding and fabricating machines without the old wait for drying. Printing is rapidly approaching the continuous production and assembly line methods used in other industries.

Whether we like it or not, to compete in this age of Graphic Arts miracles, is to accept new standards of speed and quality which change at a dizzy pace. Only the farsighted can hope to survive.

Some of you may say, "That's fine for the printer with plenty of capital to invest. What about the printer who hasn't the money to install expensive equipment?" The press manufacturer and the ink maker have made it possible for the smaller shop to increase its production schedules also. Inks employing the new fast drying principle may be used on ordinary presses, particularly the newer types, with little or nothing more than the ordinary heating equipment.

1940 Mechanical Conference

W. E. Wines, Manager of the A.N.P.A. Mechanical Department, has announced that the Fourteenth A.N.P.A. Mechanical Conference will be held June 10th, 11th and 12th, 1940, at the Drake and Knickerbocker Hotels, Chicago. Convention headquarters for the fourteenth conference will be at the Drake.

Color Matching

In order to approach the question of color matching intelligently, it is necessary to consider some of the fundamentals of color from four major aspects: (1) chemical problems; (2) physical characteristics and analysis; (3) psychological and visual aspects; and (4) mechanical limitations. It is impossible to cover all of these thoroughly here, but to overlook them would not be possible in any consideration of color matching.

Rubbing or Scratching

Non-rub and non-scratch qualities are required in many kinds of printed material. In fine black and white halftone printing, it is important to permit clean handling in folding and mailing. Perhaps one of the biggest fields is in package inks. Cartons are subjected to scoring, folding and fabricating on automatic machines and they must go through without marring or scratching.

While the inks must dry hard and develop non-rub and non-scratch qualities, they must also remain open long enough to permit second and third impressions. Perhaps the greatest improvement in this field has come through the use of new vehicles developed especially from new synthetic resins. It is interesting in this connection to mention that our own chemical research laboratories during one twelve-month period examined and evaluated 140 resins not known to the trade the previous year.

Of course the new type of heat-set inks eliminated much of the rubbing and did away completely with one of the headaches of printing—that of offset.

Pressroom procedure has a great deal to do with the successful printing of non-rub and non-scratch inks. This type of ink is usually hard on rollers and requires that the rollers be washed more frequently. Roller setting is an important factor as is also the selection of the correct paper.

Gloss

There has been a great deal of suspicion that the interest in gloss inks is a temporary fad. At the risk of making a flat statement, I doubt that this is so. Like many other things, the word "gloss" is used haphazardly. We have always had a demand for gloss. It has taken many forms and when we speak of gloss we should be clear whether we mean gloss secured by varnishes, either by overprinting or spirit, or the use of lacquers or by laminating or by a new method of liquid laminating which is being developed by one laboratory, or multicolor process printing for catalogs and magazine covers.

The original purpose of gloss in most cases was that of protection rather than appearance. Gloss has a tendency to increase the color strength by increasing the percentage of reflectance. In many cases, such as on packages, the shine interferes with legibility because a high light may strike across an important part of the design. There is no question, however, that used on packages and on covers, the printed material stays fresh looking longer and its life is prolonged. However, as in many cases, the introduction of some new product or process which originally served a useful purpose becomes a fad and is applied willy nilly to many things on which it serves no particular purpose.

The chief interest in gloss inks is naturally that of eliminating the cost of overprint or spirit varnish or laminating. One of the most important factors is paper. Until recently no method of pretesting the suitability of paper for gloss inks had been developed. It is now possible to apply a pick test procedure to determine the suitability of a paper for gloss printing.

It is absolutely necessary to use a spray with gloss ink printing. One of the problems the ink maker had to solve was that of producing gloss inks which would stay open and delay crystallization until the next impression went on the sheet.

Another thing the printer must remember is that it is not possible to match every color with gloss inks. Some pigments will produce better gloss inks than others. Therefore, before selecting the colors for a gloss job, ascertain from your ink maker whether or not it is feasible to get a good match in gloss ink. It is essential that the printer have a sample of the paper and a complete knowledge of how the job is to be handled—how high it will be stacked, and whether the job will be winded.

Resistance to Deteriorants

It is possible to develop inks to resist most known deteriorants, such as acids, alkalies, alcohol, and other common enemies of a printed surface. However, it is not possible to make inks which will have this resistance and still match any given color. Certain pigments are suitable to meet a given problem and others are not. Some classes of printing cannot use high-priced pigments, which would resist deteriorants but would not meet the restrictions of cost.

**International Printing Ink Corporation, New York. Abstract of address delivered before the Pacific Coast Convention of Craftsmen's Clubs, July, 1939, Los Angeles, Calif. Mr. Welp's talk was based on replies received from 6000 printers in reply to a questionnaire asking in which printing problems they were most interested. As a result of the comments made by printers, Mr. Welp discussed Fast Drying of Printing Inks, Color Matching, Rubbing or Scratching, Resistance to Deteriorants and Gloss Inks.*

New Book Faces

The Mergenthaler Linotype Company announces the cutting of new sizes in the Baskerville, Caledonia and Janson families. Baskerville with Baskerville Bold is now available in 7, 8, 9, 10, 11, 12 and 14 point; Caledonia with Italic and Small Capitals, in 8, 9, 10, 11, 12 and 14 point, and Janson with Italic and Small Capitals, in 8, 9, 10, 11, 12 and 14 point.

HERE is a brief showing of the 10-point size of Baskerville with **Baskerville Bold. How is one to assess and evaluate a type face in**

HERE is a brief showing of the 12-point size of Caledonia with *Italic* and SMALL CAPITALS. *How is one to as-*

HERE is a brief showing of the 9-point size of Janson with *Italic* and SMALL CAPITALS. *How is one to as*sess and evaluate a type face in

Leaves for Extended Trip

Gustave F. Bagge, Cleveland printing engineer, announces that as representative of the Omega Company, he will take a business trip extending over several months to Latin American countries, including Cuba, Mexico and Central America. Date of departure is September or October. Mr. Bagge, an electrical and Graphic Arts engineer of many years experience, is familiar with the languages and customs in the countries he will visit. Any American manufacturer wishing direct representation may get in touch with him, care of the Omega Company, P. O. Box 1405, Cleveland, Ohio.

SYMBOL OF PROGRESS

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The Industry's own working demonstration of outstanding developments in The Printing World of Today — The Exposition will be a gigantic model plant. displaying the latest machinery, devices and materials to improve your production—Join with the thousands of plant owners, printing house craftsmen and other Graphic Arts executives who will make this educational Exposition their source of ideas for greater efficiency and bigger profits.

NATIONAL GRAPHIC ARTS EXPOSITIONS, INC.

480 LEXINGTON AVENUE, NEW YORK, N. Y.

A.N.P.A. Mechanical Conference

(Continued from Page 18)

The various kinds of zinc show considerable differences in the hardness loss on heating. The most recent development in the hard alloy field, *Metal A*, shows the least drop in hardness over the entire temperature range. No material change in the hardness of the hard zinc alloys *A* and *B* occurs until 300 deg. F. is reached. On the other hand, the hardness of *Metal C*, the ordinary commercial grade of photo-engraving zinc, falls off abruptly above 200 deg. F. The new alloy, *Metal A*, has a higher hardness after heating to 500 or 600 deg. F. than it does after heating to a temperature in the neighborhood of 350 to 400 deg. F.

Specific Qualities

Hardness in a photo-engraving plate is desirable quality where it is necessary to make a large number of mats from the finished engraving. It is also a useful quality where printing is done directly from the zinc plate, as is the case in the new All-tone process. The better heat resistance of the harder zincs naturally allows a greater number of impressions to be made from the plate without loss of printing quality in the light tones, resulting from wear of the highlight dots, or, in the case of line cuts, wear on the fine lines of the engraving. It has been found that the new alloy plate, *Alloy A* shown in the table, is well adapted for fine screen work because of the ability of the fine highlight dots to stand up in printing, or in the mat-making operation, without wear or distortion under the pressures.

Surface Finish

A new method of polishing photo-engraving plates has been developed recently which produces an extremely flat surface free from ridges, with a high finish comparable to a buffed plate. In this process, the polishing machine operates in such a way that the polishing scratches run in all directions. This finish is excellent for fine screen work and is equally suitable for Ben Day work.

Dimensional Changes in Plates

Changes in the internal structure of the rolled plate, resulting from the heating treatments of the photo-engraving process, are responsible for the dimensional changes. These dimensional changes are usually expansions in length or width. However, in some instances in the mat-making operation when a large number of mats are made from a single engraving and direct pressure is used, the plate may actually shrink.

The dimensional changes discussed here are not to be confused with the ordinary expansion and contraction which takes place in any metal plate when it is heated and cooled. In the case of zinc, the dimensional changes are permanent and can readily be measured after the heated plate has been cooled to its original room temperature.

One peculiarity of rolled zinc, with which many engravers are familiar but which deserves mention again, is the property the metal has of expanding more in the so-called with-the-grain direction than in the direction at right angles to the grain. See Fig. 2. The term "with the grain" means parallel to the direction in which the metal is stretched or extended in the rolling operation. Where line cuts or halftones are used for multi-color illustrations, care should be taken to have the grain direction the same in all plates of the set. This can be done by arranging to make one of the dimensions of the illustration always run parallel to the long side or the short side of the plates taken from the box.

The data given in Fig. 2 under the heading "First Heating" show that the higher the plate is heated the greater the dimensional change. The expansion or shrinkage is caused by changes in the internal structure of the metal. It is interesting to note that the two hard alloys which show little change in hardness after heating to 250 deg. F. also show the smallest dimensional changes at this temperature, and that the new hard alloy, which has the smallest change in structure on heating has the smallest dimensional changes of all the zincs tested. The amount of dimensional change on the second heating, at the hot top enamel burning-in temperature (600 deg. F.), is very much smaller with either the regular zinc or the new hard alloy than is the change resulting from the first heating at the same temperature. The change in dimensions in the new hard alloy after second heating is approximately one-tenth the change after the first heating in the with-the-grain direction and about one-third in the across-grain direction.

The practical significance of all this from a photo-engraving standpoint can now be summarized. Where close register for multi-color work is desired, it is advisable: (1) To use cold top enamel and a low temperature etching powder, since the lower the temperature to which the plate is heated, the smaller the dimensional change; and (2) to first heat the plate before any enamel is applied, to the highest temperature to which it will be subsequently subjected. In this connection, the use of the new hard zinc alloy would be decidedly advantageous.

Warping and Buckling of Plates

Zinc plates occasionally warp and buckle during the heating and cooling operations of the engraving process. Unequally strained areas seldom occur in zinc plates due to the fact that this metal within a few hours' time after rolling has the property of equalizing to a considerable extent the different amounts of strain which may exist in various areas.

If warping and buckling occur in the photo-engraving process, it is nearly always due to the unequal heating and cooling which many of the plates receive in the average photo-engravers' stove and cooler.

With the ordinary commercial grade of photo-engraving zinc, the plate is easily softened to such an extent by the heating operation that any buckling which may be caused by uneven heating or cooling can easily be removed by forcibly slapping the plate down on a flat surface. Naturally, the harder grades of photo-engraving zinc do not respond so readily to this cure for warping. The answer lies in even heating and cooling.

A so-called cooler press has been developed in our plant laboratory and is now in use in several photo-engraving shops. It consists of two cast iron, water-cooled platens which are kept in the open position by means of heavy springs and can be closed quickly through the action of a treadle. By means of suitable guides the working surfaces of the cast-iron platens are kept perfectly parallel as the press is closed. The top platen, weighing several hundred pounds, is heavy enough to flatten instantly even a badly warped plate so that cooling takes place simultaneously over every square inch of the plate's surface, both top and bottom. Even a badly buckled plate which has been heated and cooled in the ordinary stove and cooler can be flattened, if the plate is warmed to a temperature of approximately 300 deg. F. and then flattened in this press before it has had a chance to cool.

Like everything else nowadays, the process of manufacturing photo-engraving plates is not standing still. I feel confident that the plate manufacturers will keep abreast of the photo-engraving art.

Photo-engravers' Meeting

The report of the Photo-engraving Meeting was then taken up. The answer to the first question wanting information about Esquire Features' new highlighting process was as follows: The process, it was stated, had produced satisfactory results in a number of photo-engraving plants and it was felt that it had a place in the trade. Excellent results have been secured which are not obtainable in any other way. Fading copy has been eliminated.

The relation between the light source and

Status of the Foreman

"TO THE men working under him, the foreman is the president of the company," stated President Thomas Roy Jones, of American Type Founders, recently in an address before a personnel group. Speaking on the subject, "What Can the Foreman Do to Build a Higher Morale in His Department?" Jones emphasized that the foreman is the final contact between management and labor. For this reason, it is the interpretation which the gang boss puts on company policies which counts.

The success or failure of the foreman as a leader of men, Jones asserted, rests squarely on the shoulders of management. It is too much to expect the foreman to formulate policies and methods of employe supervision. Those policies must originate with the executive staff, but must be explained to the foreman so clearly and forcefully that he in turn will transmit them effectively to the men under him. Direct, personal contact must be maintained at all times between management and foremen.

Jones defined a foreman as one who has any number of men working under him, whether that number be one or a hundred. It makes no difference how small a group the foreman oversees. He is a leader and should be recognized as such by management.

Technical Information and Literature

OFFERED GRATIS TO PRODUCTION AND MECHANICAL EXECUTIVES—SEND FOR IT

PRESSROOM

1 PRESS BLANKETS—"Write for information on Vulcan Offset Blankets and Litholastic Inking Rollers."

2 ROLLERS—Information on offset, rubber, composition, nonmeltable, fabric-covered, rotogravure and graining rollers will be sent by Samuel Bingham's Son Mfg. Company.

3 PAPER—"The Champion line includes enamels, uncoated, offset, envelope, bond, tag board, covers and many others." Details will be forwarded to you.

4 INK — "Sinclair & Valentine Zephyr Blacks cost no more than ordinary inks—are indispensable on rush jobs."

5 OFFSET PRESS—"Let the skill of Harris engineers and craftsmen furnish the sources of profit in the pressroom." Booklet will be sent to you.

6 INKS—Howard Flint Ink Co. will send color selector. Coupon brings it.

7 ELECTRIC SHEET HEATER—For all makes of printing presses, folding machines, etc. "Removes static electricity — reduces fire hazard."

8 NEW SYNTHETIC ROLLER — "Goodyear Roller can be set lighter because less squeeze is required to break up the ink for distribution. Lighter set reduces wear—lessens power consumption."

9 NEW PRESS—"The 4 roller Kluge automatic is built for the printer who wants to speed production and increase profits on 'run of the hook' job work." Get further data on this press.

10 NUMBERING MACHINES — "Rotary Presses equipped with Wetter machines number better. Locking time reduced. For right angle or parallel operation."

11 TYMPAN—"A low-priced tympan with hard even surface and exceptional strength." Coupon brings details from the Riegel Paper Corporation.

12 LUBRICATION —"Blanchard Pulsolator reduces oil consumption 60%." Bulletin B-30 will be sent.

COMPOSING ROOM

13 TYPE METAL—"Write today for details about the Imperial Plus Plan.—Eliminates costly recasts and production losses."

14 HEATING UNIT—"One-Piece Chromolox Unit, for Linotype Electric Pots, replaces the two immersion units now used." Details.

15 COMPOSING MACHINE — "Linograph 50 offers more value per dollar invested." Use the coupon for complete information.

16 CUT CEMENT—"Booth's Zinc Cut Cement helps maintain production pace. Setting time has been reduced 30% — cuts are mounted "iron to iron."

17 TYPESETTING MACHINE — "THE Monotype saves time spent in type distribution and betters the quality of printing—also makes type and material for hand composition." Circle this number on the coupon and mail.

18 SAW—Milwaukee Saw Trimmer Corporation announces the C&G Sawliner. "Priced low enough to permit purchase of several as auxiliary saws."

19 CUT MOUNTING — "Type matter can be set to within four points of the cut with Challenge Steel-Gripp Catches."

20 COMPOSING ROOM EQUIPMENT — "Give your composing room the facilities which the Ludlow system affords." Full information will be mailed to you.

STEREOTYPE DEPT.

21 DRY MATS — "Stereotypers can't depend on guesswork for trouble-free casting." Wood Flong Corporation will send free sample lot of its product.

22 GUMMED PACKING FELT—"Flecto," states Eastern Newspaper Supply, "is successfully used on all types of dry mats. Gauges are uniform—does not slip."

23 DRY MATS—"For dependable stereotyping, rely on Certified Dry Mats, made in U.S.A."

24 DIRECTOMAT "Gives new speed, accurate control of pressure, new quality of reproduction of halftones, Benday, light face and bold type." Circle the number on the coupon.

25 DRY MATS — "Burgess Chrome Mats give faithful impression." Let the Burgess Cellulose Company send you complete data.

26 MAT FORMER — "Stahl's Master Former has new vacuum forming bolster bars that automatically follow shrinking dry mat—effecting perfect bolsters." Mail the coupon for information.

27 STEREOTYPE EQUIPMENT—Wood Newspaper Machinery Corporation will send particulars on Heavy Duty and Standard Pony Autoplates.

28 NEW DRY MAT—Samples will be sent by Flexideal. Specify thickness and shrink-type of equipment you are using.

29 BACKING FELT — "Flex-O-Felt," states American Publishers Supply, "adheres 100% to the mat before and after scorching. Has scientifically prepared coating."

MISCELLANEOUS

30 ZINC — "Zomo-Zinc and A-Z Alloy metals are cast in the electric induction furnace — scientifically controlled.

This coupon must be filled out completely in order to secure the literature or information you request. Circle only those bulletins you particularly want. This service is *only* for production and mechanical executives. *Suggestion:* Paste coupon on penny postcard and mail.

For Production and Mechanical Executives Only.

PRINTING EQUIPMENT ENGINEER **July**

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30

PRINT YOUR NAME AND ADDRESS

NAME.....TITLE.....DEPT.....

FIRM NAME.....

STREET.....CITY.....STATE.....

the kind of film used depends entirely upon the film used.

Superspeed film can be kept flat on the camera back by a hinged plate glass. Some obtain equal results from vacuum back. Black paper can be used 1/8 in. from base on vacuum back.

Use and abuse of flash exposure. A flash exposure is only a supplementary exposure. Color value should be gotten in original photo. Flash exposure helps make up for lack of accurate development in the small shop.

Films and negatives dry better if mild heat is used with plenty of air.

With reference to back-coated zinc, it was reported that it has definite merits, it is cleaner and faster, but is not available in all brands. Additional cost is a factor.

The best way to clean halftone screens is to use Bon Ami and cheesecloth previously boiled to remove the filler. One photo-engraving executive mentioned a prepared cleaner which he used and stated it gave satisfactory results.

"What is the best depth of halftones for high-speed printing?" brought this answer: Minimum depth, 0.006 in. in the highlights; 0.004 in. to 0.0045 in. in the middletones and from 0.001 to 0.0015 in the shadows, for 60-line screen.

The observation was made in the report that a careless stereotyper can spoil the best zinc etching.

Walter Hogan, Pressroom Superintendent of the Long Island (N. Y.) *Daily Press*, arose to inquire to what degree the pressroom can be held responsible for poor reproduction of halftones.

Maynard P. Wright, Photo-engraver, of the Charleston (W. Va.) *Gazette*, who stated he used to be a pressman, declared the question could be decided by changing plates from first to second impression. Several other executives got into the discussion and it was brought out by some of the pressmen that irrespective of the photo-engravers' skill and the skill of the stereotyper, good work by the pressman is necessary in the printing of papers. It was generally agreed that cooperation by and between the mechanical departments would eliminate many troubles in newspaper printing.

With respect to air-driven router heads, it was reported that they are valuable for special work on very thin metals. Generally speaking, motor-driven routers with proper bits usually do satisfactory work.

Cold top enamel *can* be made in the photo-engraving department, but the difficulty in obtaining satisfactory manufacture and consequent results is the human element.

J. H. Gibson, Photo-engraving Superintendent of the Houston (Tex.) *Chronicle*, said he was impressed with the splendid talks on co-operation between the various mechanical departments to get the best possible results from occasional faulty work, such as might be caused by etching, stereotyping and press adjustments. He told the executives present: "We're all touchy about the work in our departments. A plant may contain the finest machinery but if the human element isn't involved, the newspaper plant can't give the advertiser the results to which he is entitled." He feels strongly that cooperation by and between departments should be discussed at future mechanical departments.

Onken Discusses Photographic Retouching

Frank Onken, Chief Artist of the Baltimore (Md.) *Evening Sun*, discussed *Retouching of Photographic Copy* at the conclusion of the Photo-engravers' Meeting on Monday afternoon.

Mr. Onken asserted the art and engraving department heads should get together in their mutual interests to determine just what copy reproduces best by newspaper photo-engraving process.

Importance in securing best results in newspaper illustrations is the retoucher's function, whose chief duty is that of correcting tone values.

So that the retoucher may do his job efficiently, he must understand something of the possibilities and limitations of halftone reproduction, particularly with respect to the screen camera. He should understand that the screen camera is not as versatile as the human eye, and therefore cannot distinguish between slight tone graduations, and retaining detail in the same register while letters are prevalent in the same copy.

Composing Room Meeting

The Composing Room Meeting took place in the Ball Room of Hotel Benjamin Franklin, Monday afternoon. The meeting was not finished, however, until after being taken up again at the Monday night meeting after the *Newsprint Question Box* and Dr. F. W. Hochstetter of Pittsburgh had taken up their allotted time. With Chairman Link at the presentation of the composing room report were Co-chairmen John Burke, of the Gannett Newspapers and Fred Schaub, of the Decatur (Ill.) *Herald-Review*.

The condensed report of the Composing Room clinic as presented to the general meeting on Wednesday, did not make specific recommendations on most of the topics discussed because there were differences of opinion among those attending the meeting. However, a resolution was adopted requesting the Mergenthaler Linotype Company, Intertype Corporation and Linograph Corporation to standardize the alignment of two-letter 18 and 24 pt. matrix faces. This resolution was unanimously voted after representatives of Intertype and Mergenthaler had explained the adaptability of the other company's matrices to their machines. It was explained by Richard Fosdick of Mergenthaler Linotype Company, that only a slight change in the Linotype mold auxiliary aligning rail is necessary in order to accommodate Intertype two-letter 18 and 24 pt. display matrices. Herman Freund, Chief Engineer, Intertype Corporation, stated that no alteration was necessary in the Intertype to accommodate the use of Linotype two-letter 18 and 24 pt. matrices.

In the discussion resulting from the question "What is the best method of identifying news and ad engravings?" most of the speakers think it is not a problem of the composing room. Ray Leach of the Omaha (Neb.) *World-Herald*, put the burden on the engraver. In his plant, the engraver puts cuts with the original order for the ad room; if the cuts are for other use, they are specified as being for editorial, sports, society, etc. Since adopting this system, no trouble is experienced in identifying cuts.

C. Frank Mann, Composing Room Superintendent of the Louisville (Ky.) *Courier-Journal* and *Times*, and William Coddington of the Youngstown (O.) *Vindicator*, both asserted it was the responsibility of the dispatch room in their plants.

Bernard F. Garrity, Mechanical Superintendent of the Hartford (Conn.) *Times*, explained the sticker system used in the *Times* plant. The sticker is gummed and is perforated cross-wise through the center. The sticker contains blank spaces for guide lines and date. Upon receipt of copy, the sticker is tipped to the copy before being sent to the engraving room. When the cut has been finished, the photo-engraver tears off the lower half of the sticker and attaches it to the bottom of the cut before delivery of copy and cut to the composing room.

The question "Do any newspapers employ a competent printer to inspect all advertising copy before it is passed on to the composing room to be set?" seemed to have been proposed by some printing plant executives not familiar with dispatch or control room operation. It was brought out in the discussion that it was not intended to have a printer inspect advertising copy to arbitrarily change the advertisers' copy to suit printing regulations, but rather to avoid sending copy to the ad room so as to prevent excessive resetting of advertisements.

John A. Burke, Production Manager of the Gannett Newspapers, stated that on the *Rochester Times Union* and the *Democrat* and *Chronicle* composing room a publications desk or control room is in operation. Mr. Burke explained that 2,000,000 lines per month pass through the composing room of these two papers. All copy goes first to the publications desk, orders are placed on the copy, cuts and mats are indicated. If necessary, the publications desk gets cuts and mats to accompany the copy before being sent to the composing room. All proofs are dispatched by the publications desk. A complete record of proofs is kept. Sometimes as high as 17 proofs of one advertisement are necessary before the advertisement is satisfactory.

In some cases where the store corrections necessitate marking the proof so that a printer cannot very well follow out the corrections indicated without considerable loss of time, the proof is cut into sections at the publications desk, the corrections are marked on each section, and the sections are then sent to the ad alley, so that the corrections may be made.

Mr. Burke stated that in cases where the advertiser's copy did not appear to be suitable according to the type indicated, that the head of the publications desk would call up the advertiser and try to get him to consent to a suggested change which would make the copy suitable for the type which is to be used.

As a closing bit of information Mr. Burke stated that if the volume of business warranted it, the installation of a publications desk was the final solution to a great many aggravating composing room problems.

Other composing room executives stated that their experiences with a man to watch copy had been most agreeable.

Ray Leach of the Omaha (Neb.) *World Herald*, stated that the composing room executives before installing what necessarily must be an operation which would require additional expense, should first determine what the operation would cost, to see if it will pay, and if the advantage to be gained will more than offset the proposed additional cost.

An unanimous "Yes" was the answer to the question "Would there be a saving in time if thickness of electrotype cuts were uniform?"

It was the consensus of opinion that if Intertype, Linotype, Monotype, and Ludlow would adopt the same names for identical type faces that identification of similar faces made by different companies would be facilitated for the printer.

Al Oberg, Composing Room Superintendent of the Flint (Mich.) *Journal*, stated that he saw no reason for maintaining Monotype storage. The Monotype system can be successfully operated in a newspaper composing room without the use of type storage cabinets.

In discussing the relative efficiency of making up the paper on trucks or makeup tables, Ray Leach stated that he had made the change from trucks to tables in his composing room, but that he was not more than 90% sold on the idea. The other 10% was caused by the flexibility needed which only trucks could provide. On future sports and society matter made up on tables, the makeup man has all materials in front of him.

Those pages, however, which must be made over seven or eight times a day are still made up on trucks. He feels that pages made up on trucks require less space than would be the case with tables.

Andrew R. Mervick, Composing Room Superintendent of the Pittsburgh *Sun-Tele-*

Announcing—

100% American Made

A NEW DRY MAT

We think it's the best mat made today; and we think you'll agree. Anyway, it will cost you nothing to find out. Send for free samples! Please specify thickness and shrink, and tell us what equipment you are using.

FLEX
All-American
DRY MATS

● Don't be afraid to try something new. The man who moves ahead is the man who is always on the lookout for improvements.

Flexideal Dry Mat Company, 21 West Street, New York

graph, said that recently he had gone back to making up on trucks. Material storage is carried above the trucks in overhead racks, which in his opinion are efficient. When the trucks are returned from the stereotype room, they are always placed in the same position in the line.

C. L. Ray of the Winston-Salem (N. C.) *Journal* and *Sentinel*, corroborated Mr. Mervick's experience with overhead material storage for the truck makeup system.

Chairman Link, after a discussion had taken place between the relative merits of machine-cast or solid stereotype base for mounting cuts, called for a vote. It was shown by the vote that two to one of the composing room executives prefer stereo base for mounting halftone cuts.

The majority of the executives present prefer shell cast stereotypes rather than type high casts, because of the ease with which mitering and routing may be done, and also in the case of corrections in advertisements. With respect to the use of brass for want ads, it was shown by a four to one vote that the composing room executives present prefer Monotype or Elrod cast rule over brass rule for use in connection with want ads.

Many of the composing room executives present use aniline dyes to facilitate the killing out of type between editions. Jack Burke, Production Manager of the *Gannett* Newspapers, Rochester, New York, reported that aged developer from the engraving room makes a splendid slug marker. After it has served its usefulness as a developer, it becomes a dye and is brownish in color.

It was generally agreed that the use of copy-holders in the proof room slows up proofreading work.

Several machinists and two representatives of line-composing room machine manufacturers spoke on the question of overcoming sinks or airbells in large type slugs. Among those who discussed the problem were Fred A. Stouffer, Composing Room Machinist, Syracuse (N. Y.) *Post Standard;* Joe Cory, Composing Room Machinist of the Youngstown (O.) *Vindicator;* Richard Fosdick, Mergenthaler Technical Man; Herman Freund, Intertype Chief Engineer, all discussed the elimination of airbells in display slugs which would cause a sinking of the slug under stereotype dry mat roller pressures. It was generally agreed by all of those specializing on this subject that time permitted for proper maintenance of the machine and metal together with careful regulation of metal temperature would eliminate much of the difficulties now experienced by composing rooms where this trouble is prevalent.

Russell Calkins exhibited a machine-cast display slug and asked why the face of some of the letters contained "swirls" or "circles." It was volunteered that perhaps the presence of these curved markings in the face of the letters might be due to the fact that the matrix line is cold when the first cast is taken, but that these defects will disappear when the matrix line has become warmed from contact with the metal on successive casts.

It was unanimously voted that a daily routine schedule of maintenance for composing machines does reduce maintenance cost and downtime of the machinery.

William G. Boyle of the Wilkes-Barre (Pa.) *Times-Leader* and *News* was very enthusiastic in his description of the composing machine routine system and stated that undoubtedly such a system pays big dividends. Herbert Stanger, Production Manager of the *Christian Science Monitor*, (Boston), stated that over a several-year period in collaboration with the composing room machinist he had done much to refine the composing machine routine system and had cut out certain operations which experience showed not to be essential in the maintenance of a plant of composing machines. As a result of these analyses they felt that the system being used in the *Monitor* composing room had been refined to a point where no unnecessary operations were contained in the system.

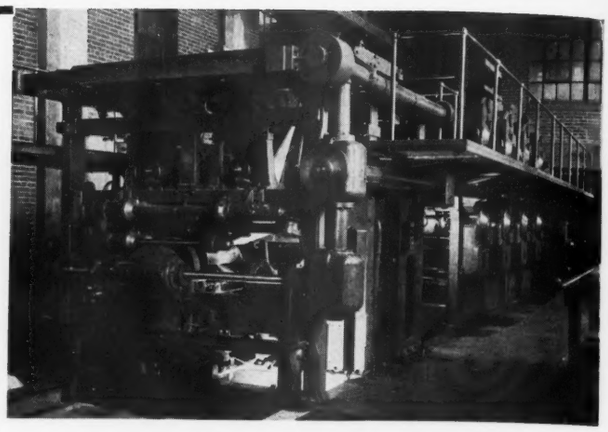
Wednesday Morning

New Light Sources for Photo-engraving

Production Manager John W. Park of the Chicago *Tribune* and Pressroom Superintendent Walter Ogden of the Cleveland *Press*, acted as chairmen for the Wednesday morning meeting. At this time, Commercial Engineer R. E. Farnham of the General Electric Company, presented an illustrated talk on *New Light Sources for Photo-engraving and Photography*. Mr. Farnham exhibited lamps of various kinds and for various purposes recently developed in General Electric Laboratories. Among these were a spot lamp for newspaper printing presses for illuminating the inside of press units. He exhibited, demonstrated and explained the new mercury water-cooled 1000 w. lamp* designed especially for photo-engravers' printing operation; a unit assembly of these same lamps (3000 w.)* which had been prepared for Lanston Monotype Machine Company's new equipment; photo-flood lamps; an infra-red ray lamp for drying film; several sizes of flash lamps, among which were two models for use with focal plane camera shutters and which eliminate shaded pictures when used with this type camera; a new 1500 w. Mazda copy board lamp* which is used in groups of six (three on each side of the camera) in special reflectors; and the new fluorescent

*See footnote, column 1, next page.

30,000 Standard 8-page Newspapers an Hour IN FOUR COLORS ON EACH SIDE—



with VULCAN Offset Blankets and Litholastic Inking Rollers

● Last fall the Trenton Times Newspapers, Trenton, N. J., started a new Hoe rotary offset press on the printing of pictorial sections for Sunday papers.

The press is the first of its kind and is fast. It prints 30,000 standard size 8-page newspapers an hour, with four colors on each side, over a 68-inch web, running at approximately 800 feet per minute.

This is probably the first time in the history of offset printing that offset blankets and inking rollers have been required to print 120-screen halftones in four colors at this fast speed and on paper only slightly better than newsprint.

The Trenton Times press is equipped with 8 Vulcan No. 43 Offset Blankets, and 88 Vulcan Litholastic Inking Rollers — which are handling this tough job just as efficiently as they have handled many other jobs not as fast but fully as tough.

Write for particulars and recommendations on Vulcan Offset Blankets and Litholastic Inking Rollers.

VULCAN VULCAN PROOFING COMPANY . 58th ST. and 1st AVE., BROOKLYN, N. Y.
Offset Blankets and Litholastic Inking Rollers

tube lamps* for daylight illumination. It is startlingly evident from Mr. Farnham's talk that much has been done in developmental work to meet the requirements of illuminating and specialty lamps for use in the printing industry.

One executive asked Mr. Farnham what danger there was to the eyes of the operator in contracting conjunctivitis when working about the new water-cooled mercury midget sun lamp. Mr. Farnham replied that there was no danger at all since the laboratory had included special precautions against this in the design of the lamp.

Stereotypers' Meeting

The stereotype meeting was reported at the Wednesday morning session after Mr. Farnham's discussion of *New Light Sources for Photoengraving and Photography*. F. L. Yeager, Production Manager of the Indianapolis (Ind.) *Star*, presided as chairman at the Stereotypers' meeting, but John Park, Production Manager of the Chicago *Tribune*, read the report of that meeting at the general session on Wednesday morning. Mr. Park had as assistant chairman at this meeting Mr. Yeager, Pressroom Superintendent Alexander Kramer of the Syracuse (N. Y.) *Post Standard*, and Pressroom Superintendent Walter Ogden of the Cleveland *Press*.

In answer to the question "Has anyone experimented with making the two bottom lines on a page slightly lower than the rest of the plate?" the report determined that several executives felt that the type is battered down in the arch of the shaving machine. Earl Burwell, Stereotype Superintendent of the Cincinnati (O.) *Times Star*, explained some little adjustable lugs which he had applied to prevent this sort of thing.

It was felt that it was a composing room responsibility to see that all cuts are properly placed in the form. However, it was stated the stereotype department should watch signature cuts, and that the stereotyper should point out to the composing room when a change in cuts is necessary.

The old question respecting the merits of steel base for molding halftones arose at the stereotypers' meeting and it developed that nearly all of the newspaper plants represented by the stereotypers present at this meeting use stereotype instead of steel base. The reason for this, it was explained, is that several had discontinued the use of the base because the editors frequently changed sizes of cuts, which involved changes in cut captions, so that they felt the use of stereotype base was more flexible and hence more economical from a production standpoint.

Open newspaper pages shrink more in the mat than those composed of solid matters.

Mill-conditioned mats were discussed with reference to moisture condition and reconditioning in the stereotype department. It was generally conceded that moisture variation is in the mat when received from the manufacturer. The majority of stereotype executives felt that better results can be obtained by conditioning mats over a several week period. The mats should be ordered in small quantities.

In answer to the question "Is there any mat which will give shrinkage in width more than twice that of length?" it was conceded that no such mat is known at the present time. The average shrinkage is five lines in depth, and nine lines in width.

It was determined that 2 points seemed to be the minimum sufficient space between the date line and head rule to insure a deep sharp impression of the date line in the mat.

Production Manager Lion Link of the Cleveland *Plain Dealer* discussed the height of column rules. After a show of hands it was indicated that the executives present at the meeting were evenly divided as to the relative merits of type-high and below-type-high column rules.

Charles L. Webb of the Los Angeles, California, *Times*, feels that 0.915 in. column rule should be the universal height.

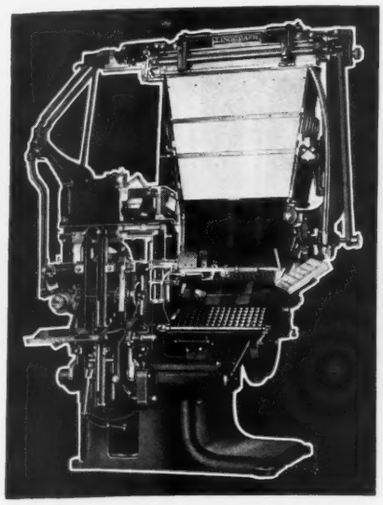
Leon Link, Cleveland *Plain Dealer* Production Manager, discussed new and old strip molds on Monotype machines, and cited one instance where an old mold caused trouble because the rule cast in it was type-high. Replacing the mold with one in unworn condition and casting 0.915 in. high rule remedied the stereotyper's trouble in that particular plant.

Production Manager Albert Lengel of the Oakland (Cal.) *Tribune*, said that an extremely sharp face on column tule has something to do with the stereotypers' trouble in cutting mats. He indicated that column rules should have a rounded face to prevent cutting the mat.

Chairman Park called for a vote as to how many of the executives present were using cast or brass head rules. The vote indicated that a majority were using cast rule, and that the users of steel or brass rules are in the minority.

In answer to the question "Should the mat be packed on both sides of the date line?" it

*Editor's Note—*The 1000 w. mercury water-cooled lamp was illustrated and described on p. 28, Jan. 1939 issue of* Printing Equipment Engineer. *The 3000 w. mercury water-cooled lamp described, appeared on p. 29, Oct. 1938 issue. Illustration with description of the 1500 w. Mazda copy board lamp appeared on p. 66, June 1939 issue. Illustration with article on fluorescent daylight lamps used for color matching in plant of Crowell Publishing Company, appeared on p. 28, Jan. 1939, issue.*



LINOGRAPH 50

MORE VALUE PER INVESTED DOLLAR

Thank You Gentlemen

The deep interest and spontaneous enthusiasm displayed by those of you who attended the Mechanical Conference of the A.N.P.A. in Philadelphia last month will long be to us a prized memory.

We placed the Linograph "50" under the searching spotlight of expert scrutiny. It required no courage to do this because we KNEW our product would command the favor of the most critical—for we have combined all of the finer essentials of value, stamina, performance and PRICE into this most advanced of all typesetting machines.

A Linograph "50" in your plant will deliver big returns in those important satisfactions which are the basic incentives of all Progress.

We shall regard it as a privilege to discuss these possibilities with you.

Complete Information is Yours for the Asking

LINOGRAPH CORPORATION
DAVENPORT IOWA

TEAR OUT AND MAIL THIS COUPON

LINOGRAPH CORPORATION
450 West Front St., Davenport, Iowa

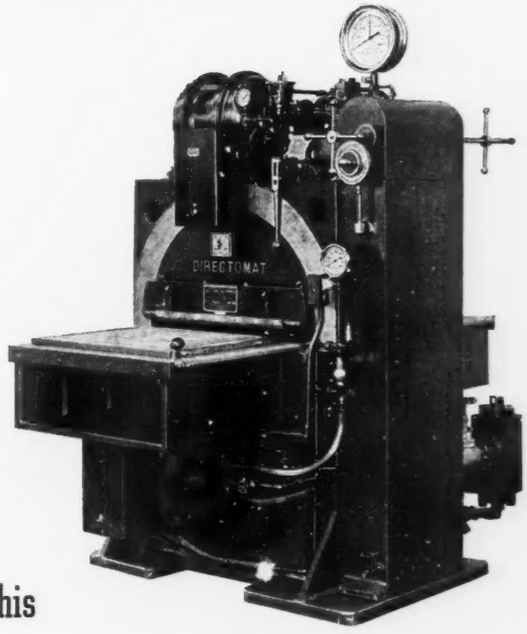
Gentlemen: Please send us your complete, illustrated Linograph "50" Catalog.

Name..... By.....
(Title)

City..... State.....

Old Prejudices Went out the Window

When Stereotypers Made Mats by DIRECT PRESSURE at the ANPA Mechanical Conference



on this

Lake Erie Directomat

The many stereotypers who actually MADE MATS by direct pressure on Lake Erie Directomat got plenty of new ideas on mat making at its best.

They took advantage of this chance to actually make mats themselves and see how Directomat gives them New Speed, New Easy Operation, New Accurate Control of Pressure, New Quality of Reproduction of Halftones, Benday, light face and bold type!

Write for complete information on why plants from coast to coast are swinging to Directomat.

Lake Erie Stereotype Equipment Corp.
Buffalo, N. Y.

was conceded that a narrow space does not require packing.

It was felt that variations in the distance between the head of the plate and the date line could not be eliminated entirely. Production Manager Lester Yeager of the Indianapolis (Ind.) *Star*, described a curved trimmer which he uses and which he stated trims a mat to the curvature of the casting box. The mat is trimmed on four sides and the real length of mat is determined by the final trim. The final trim, however, is not made until after the mat has been dried and is ready for casting.

"Old Man Local Conditions" again poked his head into the discussion as to whether there is a good rule for determining proper molding depth in mats. It seemed that all of the stereotypers present feel it is a matter of personal judgment on the part of the stereotyping executives in the newspaper plant.

It was shown that although few of the executives present are using Sta-hi preheat adjustment on the Sta-hi former that the device does eliminate buckles and saves considerable time.

The report stated that fast pouring is recommended over slow pouring when casting plates, but that if slow pouring is employed the box should be hot.

The vacuum back for Autoplate casting boxes was praised highly because it removes buckles. It was stated definitely that on late machines the vacuum holes in the box are easy to clean and no difficulties should be experienced from this source.

Where stereotypers do not have a shaver the best method of making flat casts to proper thickness is to have bearers of the same thickness as the mat and then put the bars on top of both.

The question "What depth is required in open spaces (of various sizes) in plates to be certain that they will print clean?" brought the answer that the depth of molding should depend upon the hardness of the press packing and rollers. However, William V. Cowgill, Mechanical Superintendent of the Cleveland *News*, arose to discuss cooperation between the mechanical departments as a means of eliminating smudgy print and other imperfections in the newspaper page.

Frank Parker, Pressroom Superintendent of the Staten Island (N. Y.) *Advance*, discussed and advocated makeready on plates because of the lack of facilities in a plant the size of his. "It is obvious," said he, "that plates can be cast shallower for a hard packing press, but that they must be cast correspondingly deeper on a press dressed with soft packing."

The average loss in depth in stereotype plate making, it was determined by the stereotypers' meeting, is 0.0005 in.

Pressroom Meeting

The Pressroom Meeting held on Monday afternoon and reported at the Wednesday meeting, considered a variety of problems related to pressroom operation and maintenance. Pressroom Superintendent Alexander Kramer of the Syracuse (N. Y.) *Post-Standard*, presided. He was assisted by Pressroom Superintendent Walter Ogden of the Cleveland *Press* and John J. Shea who is associated with the Hearst mechanical department, New York. At the Wednesday morning general meeting, John W. Park, Production Manager of the Chicago *Tribune*, read the summarized report.

Some of the problems discussed and the answers are given below:

In response to a query about the use of white metal bushings, John E. Mosher, Rochester (N. Y.) *Times-Union*, stated he had been using them in his pressroom for the past year. He stated he had found them more economical of installation than bronze bushings and cost about half as much. In response to a question by Gene Doyle, Mechanical Superintendent of the Toledo (O.) *Blade*, he stated the white metal bushings run cooler than bronze bushings.

Tolerance allowable in printing press cylinder bearings on a 30,000 per hour press was stated to be 0.003 in. by Mr. Mosher. Gene Doyle observed that Albany grease is used for lubricant in his pressroom and that at least 0.005 in. for bronze bushings must be allowed for presses operating at 30,000 per hour operation.

George Kent of the New London (Conn.) *Day* asserted that light streaks across many papers is caused by the condition of the bearings, to which Mr. Doyle replied that he had never been thoroughly convinced that cylinder jumps are caused by loose bearings. The cylinders may be loose on the shaft or form rollers may not be set properly.

Walter Ogden stated it is quite evident that the closer the fit of the bearings the more perfect the circle, hence, harder packing could be used.

It seemed to be the consensus of opinion of several executives who spoke on the question: "Which is the better method of carrying impression, the same amount on both cylinders, or one a little heavier than the other?" that overpacking the second impression cylinder is not justified in attempting to improve first impression printing.

Joe Addison, Pressroom Superintendent, Hartford (Conn.) *Times*, thinks much of the trouble between the first and second impressions is caused by the lack of uniformity in what he is pleased to call the "teeth" of the plates.

In the discussion on the relative merits of draw sheet three-piece combination versus the two-piece combination packing, the chairman called for a vote of the pressroom executives

OFFSET
RUBBER
GRAINING
COMPOSITION
ROTOGRAVURE
NON-MELTABLE
FABRIC-COVERED
VARNISH & LACQUER
ROLLERS

SAM'L BINGHAM'S SON MFG. CO.
CHICAGO

ATLANTA CLEVELAND NASHVILLE DES MOINES DETROIT
DALLAS HOUSTON INDIANAPOLIS KALAMAZOO KANSAS CITY
ST. LOUIS MINNEAPOLIS PITTSBURGH SPRINGFIELD, O. OKLAHOMA CITY

So he whistled for the other boy—

—did this subscriber, who grew tired of sitting on his steps half an hour after the rival paper was delivered up and down the street.

'Other boy' gained a steady customer. Subscriber gained thirty minutes in his evening pleasure—all credited to Certified speed by the knowing ones down at the office.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION

9 Rockefeller Plaza, Dept. M, New York, N. Y.

Certified DRY MATS

ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots. Stand-A-Lone Holders 2 for 25c, per doz. $1.00.

HELPING MAINTAIN PRODUCTION PACE

Newspaper production travels at a fast pace. We are helping production and mechanical executives maintain that pace without sacrifice of printing quality by furnishing Booth's Zink Cut Mounting Cement, the setting time of which has been shortened 30%. Use the cement sparingly—for the sake of maximum adhesive properties, economy of coverage from each tube, and to avoid causing the cement to ooze out from the edges of the cut. Booth's Zink Cut Cement does not change the all-over contact of cut with base—cuts are mounted "iron to iron" without printing level deformation.

Rubber Rolls for Line-Composing Machine Keyboards—

We now have rubber rolls suited to the special requirements of Intertype and Linotype keyboards. Linotype rolls exceed 1 in. diam. when mounted on the shaft. Intertype rolls furnished to caliper 1 in. when mounted on the roll shaft; Intertype rolls also are ¼ in. longer. Colored green for your protection. Trial pair $1.30; dozen $7.00. U. S. only.

Foreign Distributors:
SEARS, LTD.
Toronto, Montreal, Winnipeg, Vancouver, Canada
JUNGER & JUNGER
Goteborg, Sweden

E. A. BOOTH RUBBER COMPANY
364 ROCKEFELLER BUILDING · CLEVELAND, OHIO

present. Of those voting, 24 used three-piece and 23 use two-piece packing.

One executive stated a new fast press is being operated in his plant. He placed the two-piece combination on the press. The machine was then operated at 48,000 i.p.h. and, he stated, a tremendous jump occurred on the second impression. After taking up the matter with the press manufacturer, the packing was changed to three-piece and the jump disappeared.

The question, "Will blankets with smooth, glossy finish tend to offset more than blankets not having so high a finish?" brought the remark from Production Manager Albert Lengel of the Oakland (Calif.) *Tribune* that he believes the smoother finish is more practical and gives the least offset.

Chairman Alexander Kramer, in replying to the query: "Why do blankets deteriorate faster at the tail end than at the head end?" stated that the initial printing strain is put on the blankets starting at the tail. In other words, we create our first stretch and impact at the tail of the blanket."

One executive discussed the practicability of underlaying of plates in the form. He stated that after underlaying halftones had been practiced in his plant over an eight-year period without securing the best results, the matter was checked into by doing some work in the mechanical departments to improve halftone printing. The first work was done in the photo-engraving room, then in the retouching department. In the stereotype room where four stereotype plate shavers were in operation, it was found that the shavers were shaving plates to four different heights. It was discovered that one particular machine was shaving plates in varying heights. Steel and mechanical bases were tried, mounting single-column cuts at 0.918 in. and two-column halftones at 0.922 in. After a time, a considerable number of halftones were printed in the paper on Saturdays. One Saturday morning, the underlays were eliminated, and surprisingly, it was discovered that a better printing job was being done without the underlays than had previously been done with the cuts underlaid. Occasionally, an isolated cut was underlaid. The cut so underlaid "dirtied up" the highlights, but without the underlay the cut printed all right. Since halftones are being mounted properly without underlays, and with the continued cooperation of the stereotype department, the plates are printing satisfactorily.

I. Tornberg of Wood Newspaper Machinery Corporation, discussed the question: "Is it true that when a tight or loose-fitting plate is locked on the cylinder that the printing circumference of the plate is changed from a perfect to an imperfect circle?"

Mr. Tornberg stated he didn't think the claim is made that a stereotype plate is perfect which can be made imperfect by locking it up on the plate cylinder. He asserted that the contrary is true. Usually, plates are as imperfect as the many variations by which stereotyping causes them to stray from the perfect path, so to speak. What may improve that plate is locking it tightly against a perfectly true cylinder. The question, thought the speaker, has been put improperly. All plates, in spite of all efforts everyone has made to make the plates true, bow in the center. Some are not perfectly true in the semi-circular directions, others in the straight line. Constant attempts are made to improve the dimensional qualities of plates. With all these efforts, the plates still are not true. They may be made slightly more true if they are locked to a true cylinder.

Production Manager Albert Lengel of the Oakland (Calif.) *Tribune*, stated he didn't think ink coverage figures are of any value except in the plant in which they are kept. This remark was made in reply to the statement and question: "Many pressmen find they are getting less coverage from ink. Is the loss caused by the general use of more illustrations or is it due to the quality of ink or newsprint used?"

In answer to a question asked about damage to concrete floor structure by lubricating oil running down from the press, sodium silicate was recommended as a remedy.

Wednesday Afternoon

Offset Printing and the Newspaper

S. H. Kauffmann, of the Washington Evening *Star*, presided as chairman of the Wednesday afternoon meeting. L. S. Pinover, Intaglio Service Corporation, N. Y., served as co-chairman.

The first speaker on the program was Thomas E. Dunwody, Editor of the *American Pressman*, who discussed *Offset Printing and the Newspaper*. Mr. Dunwody told of the advantages and disadvantages of offset as applied to newspaper printing. Considering newsprint available today offset is not a serious competitor of letterpress printing. Offset printing, however, is approximately 30% cheaper than letterpress printing. There is no first and second impression problem with offset printing because both sides of the sheet with about 0.003 in. contact are printed simultaneously. There is too much loose material on present-day newsprint. For this reason, newsprint is not exactly adaptable to offset printing and one cannot use any kind of paper because of damage to the plates by this loose material on the surface of the paper.

It is possible to obtain more delicate tones and to use finer screens with offset and it is easier to get position contact between plates and cylinders.

Mr. Dunwody warned letterpress printers that if letterpress is to remain the dominant printing process, then it will be necessary to perfect and refine that process. In the future, he predicted, offset printing will be used somewhat generally by newspapers for magazine supplements.

An Agency Man Looks at Gravure

Talking upon the subject "An Agency Man Looks at Rotogravure," V. Winfield Challenger, Director of Printing for N. W. Ayer & Son, described the rapid advance of rotogravure as an advertising medium. In 1938, 65 roto supplements having 15,500,000 circulation carried 11,000,000 advertising lines worth $10,000,000 in dollar value. During the first four months of 1939 there has been a 16% rise in gravure advertising.

Mr. Challenger stated the gravure process has been developed so that the advertiser is obtaining better color gravure, due to the following factors: (1) Better and faster presses, (2) High-speed inks, (3) Better paper, (4) Improved techniques in gallery and etching, (5) Better trained technical personnel, and (6) Better appreciation of what gravure really is. Like any other process, gravure has its technical problems, among which are register in color printing and the vexing problem of the stretching and shrinking of carbon tissue.

Mr. Challenger exhibited many comparative specimens of rotogravure advertising with running comment. As an agency man, he asked why varying results in monotone reproduction between gravure plants are obtained from the same piece of copy. The color exhibits, however, seemed to be of excellent uniformity. He feels that in the future gravure printers will produce even better results. He stated, also, that in order to help in producing better gravure printing the agency must specialize in preparation of copy.

After Mr. Challenger's address, a question and answer period was held, during which time free discussion of gravure problems occurred. Production Manager John Park of the Chicago *Tribune*, thinks the lack of uniformity in gravure printing is hooked up with short receipt of copy. Matching copy takes time.

Another point brought up in the discussion is that, from the agency standpoint, space costs should not be included in reproduction costs. Another point is that out of 15 representative newspapers, costs varied from 43% to 110% difference in color costs over black and white printing.

Carnegie Tech Printing Dept. Graduates 18

AMONG the more than six hundred young men and women who were graduated from Carnegie Institute of Technology this year eighteen received the degree of B. S. in Printing. These men came to Carnegie from widely separated areas of the United States, and one member of the class came to the Institute from China.

All but two members of the graduating class have made final decisions on offers of positions. A wide variety of activities, such as selling, job layout and planning, estimating, plant layout, production supervision, advertising production, and advertising promotion, is represented in the positions secured by this year's graduating class.

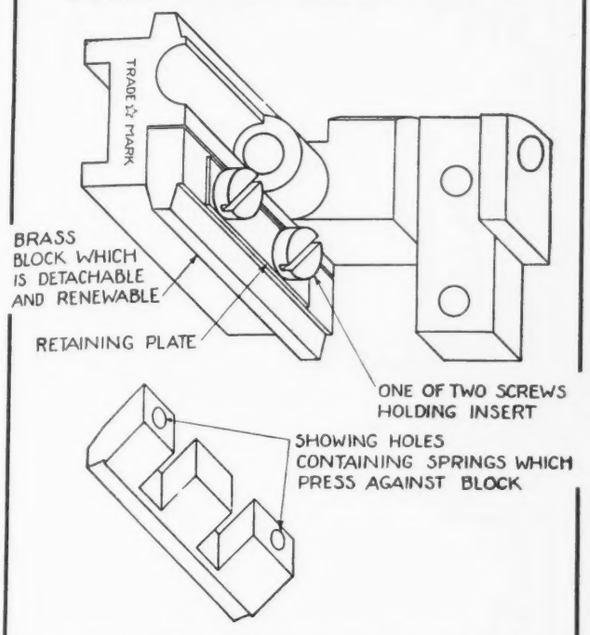
Leading the senior class in scholastic standing were Ralph N. Ives of Topeka, Kan., and Joseph E. Barnes of Rochester, N. Y. These two young men were the recipients of the first and second Aldine Awards made to members of the junior class last fall. The Aldine Awards are prizes sponsored by H. E. Gould, President of the Aldine Paper Company of New York City. The awards are given for excellence in scholastic performance over the first three years of the printing course. Junior class winners of the Aldine Awards for the coming year are Robert E. Wood of Clifton, N. J., and John A. Stankey of Pittsburgh.

Two members of this year's graduating class are holders of degrees from other institutions. Abraham Cazan attended the University of Pittsburgh and was awarded a B. S. degree in 1935. Harry J. Friedman is a graduate of Columbia University and holds an A. B. degree from that institution.

Graduates are as follows:

Barnes, Joseph E. to John P. Smith & Co., Rochester, N. Y.; Cazen, Abraham (Pittsburgh, Pa.) to Carson, Fletcher & Osborne, New York; Cunningham, Quinten N. (McDonald, Pa.) to American Type Founders, Cleveland; Drabkin, Lester Y. to Columbia Printing Co., New Haven, Conn.; Esser, Jacob R. to Kutztown Publishing Co., Kutztown, Pa.; Fouse, Donald P. (Ambridge, Pa.) to Poole Brothers, Chicago; Friedman, Harry J. to Carey Press, New York; Heindl, William A., Jr. to Louis Heindl & Son, Rochester; Ives, Ralph N. (Topeka, Kan.) to Blakely Printing Co., Chicago,; Loevner, Maurice H. (Pittsburgh, Pa.) Application Pending; Read, William F. to S. Z. Field Co., New Haven, Conn.; Silber Frank (Pittsburgh, Pa.) Application Pending; Thomas, Robert W. (Pittsburgh, Pa.) to Joseph J. Stone & Co., Greensboro, N. C.; Vassar, Thomas E., III (Bloomfield, N. J.) to Graham-Chisholm Co., New York; Williams, Oliver D. (Edgewood, Pa.) to Cuneo Press, Milwaukee; Wong, Lip King (Shanghai, China) Advanced Study in U. S.; Wright, William S. (Crafton, Pa.), and Zawacki, Manuel E. (East Vandergrift, Pa.), both go to Fetter Printing Co., Louisville, Ky.

EVERLASTING ADJUSTABLE DELIVERY SLIDE LONG FINGER BLOCK


TRADE ☆ MARK
BRASS BLOCK WHICH IS DETACHABLE AND RENEWABLE
RETAINING PLATE
ONE OF TWO SCREWS HOLDING INSERT
SHOWING HOLES CONTAINING SPRINGS WHICH PRESS AGAINST BLOCK

The block should last forever! The adjustable insert keeps the entire delivery slide *erect*—reducing wear on the *short finger block*—prevents the long finger from injuring the *assembling elevator* and the *first elevator jaw.*

Price $4.50

ONE-PIECE CHROMOLAX HEATING UNIT

(For Linotype Electric Pots)

Replace the *two* immersion units now used.

Heats up more quickly—

Sturdier

More easily installed and removed.

—

Cheaper.

Only **$30.00** Each

Precision TRADE ★ MARK Parts

LINOTYPE PARTS COMPANY

NEW YORK
203 Lafayette St.

KANSAS CITY
314 West 10th St.

Chicago 318 West Randolph St.
Minneapolis 503 Fourth Ave. South
Denver 1441 Blake St

A Laboratory Product

BURGESS Chrome MATS

Faithful Impression
WITH
Burgess Chrome Mats

Smooth surface and strength to preserve the full depth of impression make these mats superior for quality reproduction of the original type and cuts.

203

BURGESS CELLULOSE COMPANY

Manufacturers and Distributors of
Burgess *Chrome* and *Tone-Tex* Mats
FREEPORT • • • ILLINOIS

Pacific Coast Representative
RALPH LEBER CO.
426 Polson Bldg. Seattle, Washington

Executives Attending Organization Meeting of New England Mechanical Conference

First row, left to right: Burtt E. Warren, publisher of the Nashua Telegraph *and host at the dinner; Harry Zerbe, Lawrence (Mass.)* Eagle Tribune; *Stephen G. Dmitruk, Brockton, (Mass.)* Enterprise; *Elliot G. Wellington, Fitchburg (Mass.)* Sentinel; *Glen S. Magoon, Fitchburg (Mass.)* Sentinel; *Albert Prefontaine, Manchester (N. H.)* Union Leader; *Robert J. Hampton and Robert L. Gilmartin, also of the Manchester* Union Leader.

Second row: Carlton A. Braga, Woonsocket (R. I.) Call; *Edwin A. Hutt, Beverly (Mass.)* Times; *Herbert T. Stanger,* Christian Science Monitor; *George F. Marshall, Gannett Publishing Co., Portland, Maine; John J. Mahoney, Holyoke (Mass.)* Transcript; *Howard E. Dunsing, Brockton* Enterprise; *Herbert Haake,* Christian Science Monitor; *Karl G. Engle, Pawtucket (R. I.)* Times.

Third row; F. M. Britton, chairman and Andrew Palmer, Woonsocket (R. I.) Call; *Harry C. Crighton, secretary, New London (Conn.)* Day; *Harold A. Kirwan, Pawtucket (R. I.)* Times; *R. G. Johnson, Brockton, (Mass.)* Enterprise; *John Laing, president of the New England Composing Room Executives; Tim Sullivan, Holyoke (Mass.)* Transcript; *Joe Lewis, Brockton* Enterprise; *George Harris and John Robichaud of the Nashua* Telegraph.

Organize Conference

New England executives meet at Nashua Country Club, name Britton of Nashua "Telegraph" as chairman.

FRANCIS M. BRITTON, production manager of the Nashua (N. H.) *Telegraph* was named chairman of the newly organized New England Daily Newspaper Mechanical Conference at a meeting at the Nashua, N. H., Country Club May 22, attended by representatives of some 30 newspapers. Walter C. Crighton of the New London (Conn.) *Day* was named secretary of the Conference.

Chairman Britton was authorized to appoint a board of directors at his convenience and one of the first jobs of the new Conference will be the selection of a site and program for a fall meeting of heads of the mechanical departments of New England newspapers.

The executives were the guests of B. E. Warren, publisher of the Nashua *Telegraph* at dinner at the Nashua Country club. Mr. Warren welcomed the men.

After the business meeting and speaking program most of the visitors availed themselves of the opportunity of visiting the plant of the Nashua *Telegraph*.

Among the other speakers were Herbert T. Stanger, Production Manager of the *Christian Science Monitor* and Andrew Palmer of the Woonsocket *Call*.

All Institute Graduates Placed

ALL members of the first graduating class of the new Department of Publishing and Printing of the Rochester, New York Athenaeum and Mechanics Institute are secure in positions after completing the two-year curriculum. Graduates and their places of employment are Jack Salerno, Rochester (N. Y) *Democrat* and *Chronicle;* Jack Aumann, Clyde (N. Y.) *Eagle;* Edward Blair, Malone (N.Y.) *Telegram;* William Driscoll, Board of Education Printing Department, Rochester; Frank Gambacorta, Akron (O.) *News;* Joseph Horner, Buffalo Branch, American Type Founders Co.; Craig Nichols, Gouverneur (N. Y.) *Tribune-Press;* Wilson Payne, Silver Creek (N.Y.) *Creeker;* Angelo Sportelli, Oakfield (N. Y.) *Independent;* Kenneth Cooper, Clyde (N. Y.) *Herald;* and Alan Taylor, Rochester (N. Y.) *Evening News.*

Positions cover most of the printing field, and include layout, machine composition, hand composition and presswork in commercial and newspaper plants, and in the job departments of newspapers.

These reported on by graduates included library and practical research on Work-Ups, Their Cause and Prevention; The Linotype; Maintaining Register on the Press; The Graphic Arts Processes; Causes and Prevention of Offset; and Sales Methods in Printing.

Early registration is urged for the term beginning in September, as many students have enrolled thus far. Catalogs are available for the asking.

Bullen Plaque Unveiled

A bronze plaque, commemorative of Henry Lewis Bullen, former curator of the Library and Museum of the American Type Founders, Inc., was unveiled at the Columbia University Library on June 26.

Alexander Gordon Passes

Alexander Gordon, 71, retired chief machinist of the composing room of the Washington, (D. C.) *Star*, who worked with Ottmar Mergenthaler in developing the linotype machine, died on May 30. He retired in 1936 from the *Star* after nearly 44 years' service.

He was associated with Mr. Mergenthaler and the development of the linotype from the completion of the old first blower model some 54 years ago to the type-setting machine of today.

Two New Intertype Men

Intertype Corporation announces the appointment of two new representatives in the Southern area. Boyce Saunders Brogdon will cover Mississippi and Tennessee and L. B. (Cal) Calhoun, jr., will take in Florida. Both

B. S. Brogdon *L. B. Calhoun, Jr.*

men learned the printing trade in Georgia. Mr. Brogdon has been employed in almost every state east of the Mississippi. Mr. Calhoun confined himself to Georgia and Florida where he is well known in the trade. Their headquarters will be at Intertype's New Orleans Branch.

Keeping in Touch

FOR MEN ONLY—If you are an ESQUIRE reader, you have staggered under the weight of those hefty volumes which ESQUIRE is putting out these days. Usually the reason for thick magazines is lots of advertising, and that's what ESQUIRE has plenty of; figures for May issues of general monthly magazines show that ESQUIRE tops the list in advertising dollar volume. Big issues please ESQUIRE; and we must admit, coyly, that they please us, too. For ESQUIRE is one of the magazines which are Vaporin-printed. They use this modern instant-drying process to turn out their black-and-white pages and their two-color work. The next time you admire ESQUIRE's fine printing, remember that it's printed with IPI Vaporin—and remember to investigate the faster, cleaner printing that Vaporin offers you.

Successful "de-inking" of newspapers is reported in Pittsburgh. Printed matter is washed out, leaving only a white pulp. If the process will work with love letters, plenty of breach-of-promise suits can be washed out, too.

CALIFORNIA, COME AGAIN—It must be the climate! For three years in a row, a California printing student has run away with the top prize in the IPI Essay Contest, sponsored in cooperation with the National Graphic Arts Education Guild. Latest to win a college scholarship for his essay on color in printing is Robert Libott of Beverly Hills. Young Mr. Libott competed against 7000 students from cities in all parts of the country. Florida may produce oranges and bathing beauties, but California raises contest winners, too!

Nothing travels faster than gossip, unless it's gossip in print.

BLOOD-LETTING—An ink can may be a lethal weapon, according to one of our printer friends in northern Wisconsin. He sent us a letter, including a sample of his blood which was taken shortly after a struggle with an old-fashioned ink can. After the battle, he sustained a minor injury—one cut finger. Such dangerous tussles are ruled out by the new IPI Everyday cans. The tops are sealed on with Scotch Tape, and taking them off is child's play. Replacing is just as easy. Save your strength, save your blood, and save your temper by using the simple-to-open Everyday ink cans. You'll find the ink they contain is up to the high standards of the package.

Printing is the most air-minded industry. More printed matter is shipped by air express than any other commodity.

"Keep in touch with IPI."

INTERNATIONAL PRINTING INK
DIVISION OF INTERCHEMICAL CORPORATION
DEPT. P.E.I., 75 VARICK STREET, NEW YORK, N. Y.

ipi

FAMOUS *Bad* GUESSES

● The man who says, "I think I can get by," lays himself wide open to trouble. For in type metal as in everything else, it is better to be sure—safe in the knowledge that the metal is *right* with casting balance under control—than to guess and be wrong.

Guessing about your type metal is a short cut to trouble—while Plus Plan control by Imperial is your guarantee of freedom from type metal worries and production delays.

The Imperialized plant adds Imperial Plus Metal pound for pound of dross skimmed off—no guessing.

Do you want to eliminate costly recasts and production losses? Do you want sharper, solid casts, lower casting temperatures, less dross and less fuel consumption? Then write today for details about the Imperial Plus Plan.

IMPERIAL TYPE METAL CO.
PHILADELPHIA • NEW YORK • CHICAGO • LOS ANGELES

Imperial
TAKES THE GUESS OUT OF TYPE METAL

Patents

Recently Granted by U. S. Patent Office

Bookbinding:

2,159,439. BOOKBINDING MACHINERY. Robert Leighton, London, England. Application October 26, 1938, Serial No. 237,121. In Great Britain November 4, 1937. 12 Claims. (Cl. 11—1.)

1. A machine for subjecting the sewing swell of books to pressure, comprising two series of rollers forming a plurality of pairs of pressure rollers, plates extending between adjacent rollers of each series, a travelling endless band having a reach which passes between the series of rollers and engages one series thereof and the plates extending therebetween, and a second travelling endless band having a reach which passes between the two series of rollers and engages the second series thereof and the plates therebetween.

Composing Machines:

2,158,224. TYPOGRAPHICAL SINGLE-TYPE COMPOSING MACHINE. Jean du Four, Antwerp, Belgium. Application March 10, 1937, Serial No. 130,057. In Belgium March 10, 1936. 14 Claims. (Cl. 164—113.)

1. In a single-type composing machine, comprising a perforating mechanism controlled by means of pneumatic valves and a keybank, the combination of electromagnets with electric circuits controlled by the depression of the keys at the keybank for actuating the pneumatic valves.

2,159,075. MATRIX TRANSFER. David Diamond, Brooklyn, N. Y. Application October 8, 1937, Serial No. 168,036. 19 Claims. (Cl. 199—36.)

1. A second elevator for Linotype and other similar machines having an inverted channel shaped head, with shutters at the lower edges of the sides for holding matrices by shoulders at the upper ends of the sides.

2,159,274. SLUG-CASTING MACHINE. George P. Kingsbury, Hollis, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York. Application February 2, 1938, Serial No. 188,223. 20 Claims. (Cl. 199—49.)

1. In a slug casting machine, the combination of a vertically movable transporter for presenting a composed line of character bearing matrices before the face of a slotted mold, means for arresting the descent of the transporter at one or another of different casting levels, means for thereafter subjecting the transporter to pressure to effect the alignment of the characters on the matrices with the mold slot, and means for maintaining the pressure to which the transporter is subjected at substantially the same value irrespective of the level at which the descent of the transporter is arrested.

2,159,475. TYPOGRAPHIC COMPOSING MACHINE. Richard Cornelius Elliott, London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a corporation of Virginia. Application October 28, 1937, Serial No. 171,433. In Great Britain, May 13, 1937. 9 Claims. (Cl. 199—80.)

1. In a record-strip controlled single-type casting and composing machine the combination with a record-strip feeding mechanism comprising a ratchet wheel, and a driving pawl and a holding pawl, of a locking lever coupled to or operative on the holding pawl, a locking device and an adjustable counting device for the lever, operated from a signal in the record-strip, to effect a predetermined number of casts from a single-type in the record-strip and then release the feeding mechanism, and a second locking device arranged to arrest the driving pawl by a signal in the record-strip and to release the pawl when a number of repeated casts from a single-type signal in the record-strip has been made to bring the line of types to the desired length or limit.

2,159,492. PRODUCTION OF MACHINE-SET TYPE COMPOSITION. William Wigg, North Finchley, London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a corporation of Virginia. Application July 23, 1937, Serial No. 155,202. In Great Britain November 25, 1936. 6 Claims. (Cl. 164—112.)

1. In a typographic composing machine for preparing a record-strip for a single-type casting and composing machine, the combination with the S-punch or punch for the signal controlling the justification transfer device in the casting machine, of a lever adjustably mounted on the bar of the S-punch and a lug on the lever adapted in one position to override or avoid a rocking bar controlling the units measuring and paper feed devices of the composing machine and adapted in another position to engage and operate the bar, substantially as and for the purpose described.

2,160,110. COMPOSING ROOM SAW. Frederick W. Seybold, Westfield, N. J., assignor to American Type Founders Incorporated, Elizabeth, N. J., a corporation of New Jersey. Original application May 21, 1936. Serial No. 81,069. Divided and this application March 12, 1937, Serial No. 130,605. 4 Claims. (Cl. 29—69.)

1. In a machine, a saw and trimmer knife assembly including in combination, a shaft, a bearing on the machine rotatively supporting the shaft, a saw having its hub threaded on one end of the shaft, an externally threaded collar secured to the shaft, means disposed between the hub and collar to hold the hub at a definite selective adjusted position axially of the shaft, a nut on the externally threaded collar, and trimmer knives extending axially through the hub having their inner ends abutting the nut.

Feeding, Folding, Delivery:

2,158,280. MACHINE FOR FEEDING SHEETS, LABELS, AND THE LIKE. Paul W. Fleischer, Weehawken, N. J., assignor to New Jersey Machine Corporation, Hoboken, N. J., a corporation of New Jersey. Application January 15, 1935, Serial No. 1,838. 26 Claims. (Cl. 216—55.)

1. In the art of applying sheets to elements, the method which comprises independently advancing a sheet at a controlled velocity, progressively applying an adhesive coating to the sheet in a direction from the leading edge toward the rear edge, independently advancing an element at a greater velocity than the velocity of the sheet, applying an advance edge portion of the sheet adhesively to the advancing element, discontinuing the independent advancing of the sheet substantially in coincidence with the adhesive application of the advance edge portion of the sheet to the advancing element and permitting the continued movement of the sheet to be subsequently controlled by the advancing element, and progressively applying pressure to the sheet to complete the application thereof to the element.

2,162,580. SHEET-HANDLING APPARATUS. Llewellyn Hopkins, Butler, Pa. Application August 27, 1938, Serial No. 227, 145. 17 Claims. (Cl. 271—11.)

1. Sheet handling apparatus comprising vacuum cups reciprocable vertically above a sheet pack, the cups being movable into engagement with successive top sheets of the pack and arranged to lift sheets vertically from the pack, means for relieving the vacuum in the cups when they have reached their upper limit of travel, a conveyor, means operable during upward travel of the cups, for shifting the conveyor into position to receive sheets released from the cups, and means operable upon further movement of the cups for removing the conveyor.

2,162,450. FEEDING SHEETS TO PRINTING PRESSES, ETC. Burt F. Upham, Grimsby, Ontario, Canada. Application March 11, 1938, Serial No. 195,378. 20 Claims. (Cl. 271—27.)

1. The method of feeding sheets from a pile to a receiver. consisting in transferring the sheet from the pile to receiver in two successive steps, by first lifting a sheet from the pile and moving it part way to the receiver; and second again lifting said sheet and delivering it to the receiver.

2,159,147. SHEET FEEDING APPARATUS. Heinrich Gumbel, Leipzig, Germany, assignor, by mesne assignments, to Dexter Folder Company, New York, N. Y., a corporation of New York. Application May 11, 1936, Serial No. 79,148. In Germany May 11, 1935. 9 Claims. (Cl. 271—12.)

1. Sheet feeding apparatus comprising a continuously driven conveyor on which the sheets lie in lapped relation, means for feeding sheets from a supply thereof to the continuously driven conveyor, and means for accelerating and retarding the movement of the continuously driven conveyor.

2,160,526. WEB-SPLICING METHOD. Paul L. Tollison, North Plainfield, N. J., assignor to Wood Newspaper Machinery Corporation, New York, N. Y., a corporation of Virginia. Application November 20, 1936, Serial No. 111,793. 8 Claims. (Cl. 242—58.)

2. The method of effecting a firm splice of a fresh web to a running web, which consists in introducing between the webs an area of non-drying glue and a separate area displaced therefrom of wet glue of the drying type, pressing the webs together to cause adhesion of one web to the other, and drying the glue of the drying type.

2,160,855. METHOD AND MEANS FOR RENEWING WEB ROLLS IN A PRINTING MACHINE. Charles W. Ginsberg, Brooklyn, and Raymond A. Freeman, Mount Vernon, N. Y., assignorsrto R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application July 18, 1935, Serial No. 31,974. 6 Claims. (Cl. 242—58.)

1. In combination, a web of a web roll having its leading end in the form of a salient angle, a strip of adhesive extending along each side of the angle, and means disposed at the apex of the angle to connect the leading end of the web to the next course of the web on the roll; the strip of adhesive being interrupted at the apex of the angle, and the web being perforated adjacent the apex and between the ends of the strip of adhesive where the same is interrupted.

2,160,906. SHEET FEEDING AND REGISTERING DEVICE. Robert Reinartz, Offenbach, near Frankfort-on-the-Main, Germany, assignor, by mesne assignments, to Faber & Schleiher, A. G., Offenbach-on-the-Main, Germany, a corporation of Germany. Applatioen January 22, 1936, Serial No. 121,805. In Germany January 22, 1937. 17 Claims. (Cl. 271—53.)

1. In combination with a sheet feeder adapted to feed sheets in lapped sequence, the provision of mechanism including a sheet support, sheet registering guides, means for advancing sheets over the support to the guides, means for removing registered sheets from the support, and sheet lifting means acting on a single sheet to raise it while located over the support, the lifting means extending across the entire width of a sheet and being operated independently of any other of the aforesaid means.

2,161,124. SHEET-FEEDING MECHANISM. George A. Babicz, Chicago, Ill., assignor to Gaw-O'Hara Envelope Co., Chicago, Ill., a corporation of Illinois. Application January 10, 1938, Serial No. 184,212. 6 Claims. (Cl. 271—62.)

1. In a sheet feeding mechanism, the combination of an inclined frame structure, transversely extending shafts mounted at the upper and lower ends respectively of the structure, two sets of sprocket wheels mounted on each shaft, chains connecting the sprocket wheels of each set on the respective shafts, the sprocket wheels of one set being fixed to the upper shaft and the sprocket wheels of the other set being fixed to the lower shaft, a plurality of stack-supporting plates, each plate being detachably mounted on one set of chains and free from the other set of chains, mechanism for rotating the shafts, and means for selectively connecting the mechanism with the shafts in alternation to thereby elevate one or the other of the stack-supporting plates.

Miscellaneous:

2,158,237. MAKE-READY AND PROOF MACHINE. William F. Huck, Richmond Hill, N. Y., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York. Application December 28, 1936, Serial No. 117,937. 18 Claims. (Cl. 101—216.)

1. In a machine for making ready independently of the printing machine, a rotatably supported form cylinder, a rotatably supported impression cylinder arranged for printing cooperation with the form cylinder, means carried by the impression cylinder for operably securing a sheet on the cylinder for printing engagement with the form cylinder, and a slidable platform pivotally supported in predetermined relation to the impression cylinder.

2,158,552. SLIP-SHEET APPARATUS. Adolph Potdevin, Garden City, N. Y., assignor to Potdevin Machine Company, Brooklyn, N. Y., a corporation of New York. Application March 9, 1937, Serial No. 129,787. 9 Claims. (Cl. 34—1.)

1. In a machine, the combination of a receiving station, a carrier for delivering freshly printed lengths of sheet material to the receiving station, a supply of slip-sheet material in the web, means for advancing the web continuously, cut-off mechanism for dividing the advancing web into slip-sheets, a second carrier for receiving the slip-sheets individually and delivering the same individually to the receiving station, the carriers being so timed that for each printed sheet deposited at the receiving station a slip-sheet is deposited in superimposed relation.

2,162,430. PAPER HANDLING MECHANISM. Hans Hefti, Neenah, Wis., assignor to The Appleton Coated Paper Company, Appleton, Wis., a corporation of Wisconsin. Application August 17, 1938, Serial No. 225,302. 5 Claims. (Cl. 164—68.)

5. In a paper handling apparatus, the combination of a feeding mechanism for continuously feeding paper in web form, a rotary cutter for cutting the web into sheets, means for driving the cutter, a sorting table onto which the cut sheets are delivered including a series of conveyor belts, a stop device associated with the table for stopping the movement of the cut sheets relative to the belts, means operated by the cutter driving means for driving the conveyor belts and operating the stop device, the last named means including an adjustable one-way roller clutch.

2,162,331. QUICK-SETTING PRINTING INK AND PROCESS OF MAKING SAME. Carleton Ellis, Montclair, N. J., assignor to Ellis Laboratories, Inc., a corporation of New Jersey. No Drawing. Application April 13, 1938. Serial No. 201,809. 9 Claims. (Cl. 260—42.)

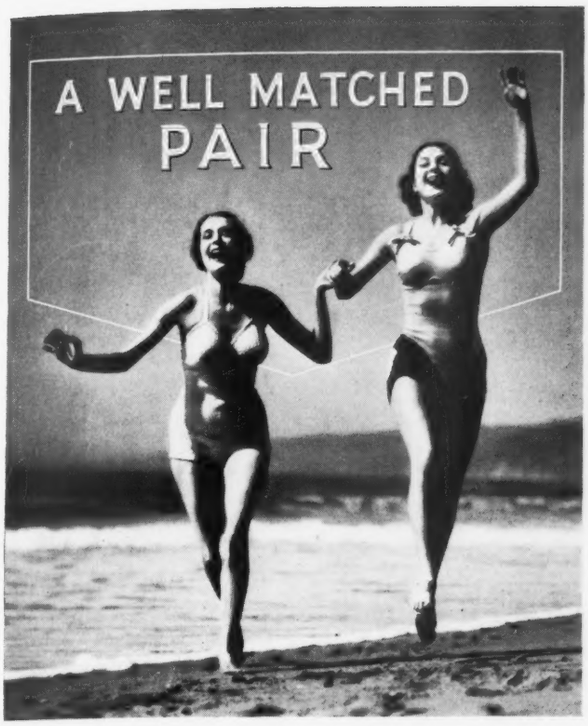
1. A quick-drying printing ink composition comprising a binding agent consisting of a heat-reactive aminoplast resin, pigmenting material, and a liquid vehicle therefor in proportion sufficient to render the composition a fluent mass having thixotropic properties at room temperature.

2,161,033. DELIVERY AND COUNTING MECHANISM FOR ROTARY PRINTING PRESSES. Frank A. Foster, Maywood. Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a corporation of Illinois. Application October 21, 1937, Serial No. 170,237. 23 Claims. (Cl. 93—93.)

1. A rotary newspaper delivering and counting mechanism including in combination feeding-off rollers, a rotary fly having peripheral pockets to receive the folded papers, a counter arm rotatably mounted on the fly, means for intermittently actuating the counter arm relatively to a fly pocket to effect the paper count, and means for receiving papers from the fly pockets.

Patent Papers

Printed copies of patents are furnished by the United States Patent Office at 10 *cents each. Address the Commissioner of Patents, Washington, D. C. and enclose* 10 *cents for each patent paper wanted.*



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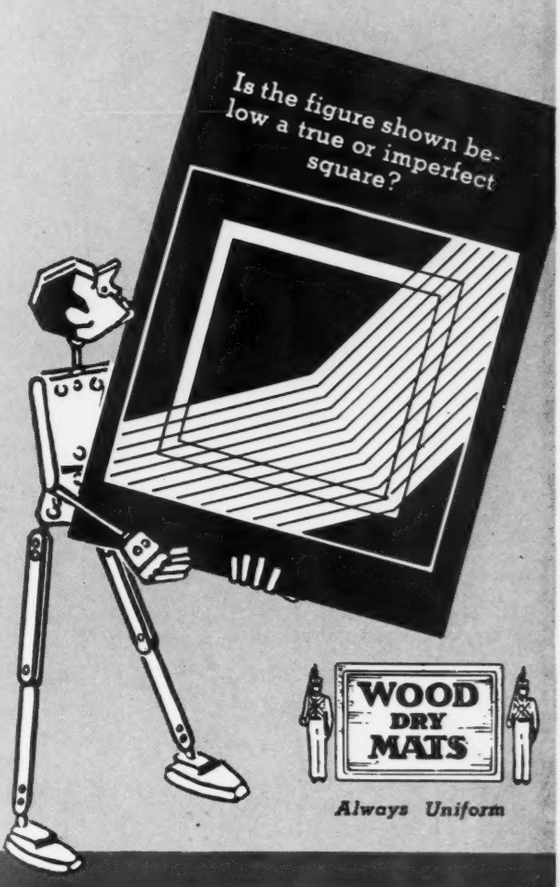

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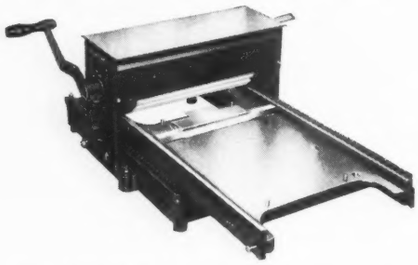
HOOSICK FALLS NEW YORK

Takes Proofs in Register

A new Series CG Proof Press that produces proofs in register has been announced by The Challenge Machinery Company. This press is identical in construction with the present Challenge Series C, except that it is equipped with bed grippers.

The gripper device is simple in design and positive in action. It is held securely between the bearers but can be removed or set to a different position quickly. To operate, the spring gripper is held open by pressing on the hand-grip at the back. The sheet is then fed to the adjustable side-guide and stationary back-gage.



View of CG Challenge Proof Press for taking proofs in register.

The Series CG Proof Press is made in three sizes: No. 1418-CG which handles galleys up to and including 12 in. by 18 in. No. 1425-CG which taken full length news galleys up to five columns wide, and No. 2025-CG which accommodates a full-size 8-column, 12-pica newspaper form.

These presses operate on the "cylinder press principle" with reciprocating bed and stationary cylinder. They are equipped with a removable galley plate so that proofs may be pulled from galley or type form. A full-size ink plate, serves as a cover for the cylinder. It can be removed quickly for changing the cylinder packing.

The Challenge Series CG Proof Presses are available with a steel stand, providing shelf space for paper, ink and other supplies.

Zinc Ink For Marking Engravings

E. E. Augustine, of Augustine Engraving Company, announces the production of an ink for marking zinc engravings for identification purposes previous to filing for future use or reference.

Zinc Ink is used by writing with an ordinary pen on the back of a zinc plate just as is done with writing ink. Mr. Augustine states the ink makes a permanent black mark that will not wash off with water, gasoline, benzol, and other solvents or fluids used in printing plants. To remove the ink, scraping or grinding is recommended.

Henry Erdman Passes

Henry Erdman, Electrical Engineer on press controls and drives and who was associated with Cutler-Hammer, passed away in Ft. Wayne, Ind., about the middle of June. He succumbed to a heart attack. He was 65 years of age. Funeral services were held at Portsmouth, Ohio, where burial took place. Mr. Erdman was very well known for his ability among pressroom executives in printing plants from coast to coast, having been engaged in his activity for the past 35 years.

New York Offices Moved

The New York offices of the Lanston Monotype Machine Company have been moved to 202 East 44th St. Telephone number is VAnderbilt 6-3155. Richard Beresford is district manager.

Appointment Made

Announcement has been made of the appointment of W. Robert Timken as Assistant to the President of The Timken Roller Bearing Company. He will continue to maintain his headquarters in the general office at Canton, Ohio.

Makes Addition

The Whiting-Plover Paper Company announces the addition of Frank Rea Sloan, Jr. to its Sales Promotion and Service Departments. Mr. Sloan graduated from the Printing Department, Carnegie Institute of Technology.

Closes Kelly Press School

Printing plants in and around Bridgeport were well represented at the recent Kelly Press School sponsored by American Type Founders. Messrs. W. Boynton, Hill, and A. Hinchcliffe praised the instruction given and thanked American Type Founders.

Sails to Europe

Neal Dow Becker, president of Intertype Corporation, sailed July 1st on his annual visit to Intertype's European subsidiary companies and sales representatives in England, France, Spain, Germany and the Scandinavian Countries. He will return in September in time for the National Graphic Arts Exhibition.

Merged With GE

The General Electric Vapor Lamp Company, Hoboken, N. J., has been merged with the Incandescent Lamp Department of General Electric Company, Charles E. Wilson, executive vice president of General Electric, announced recently.

The Incandescent Lamp Department will hereafter be known as the Lamp Department of the General Electric Company.

ROTARY PRESSES

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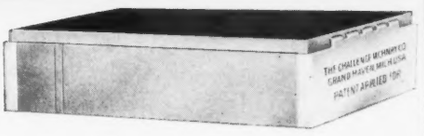

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354

Announcing

C&G SAWLINER

Companion Saw to the well known C&G Model 2 and Model 3-A Saw Trimmers

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The new C&G Trimsteel saw blade cuts slugs and metal so smoothly and clean that trimmer knives are not required on the average work. The SAWLINER may also be equipped with the famous C&G Universal Blade.

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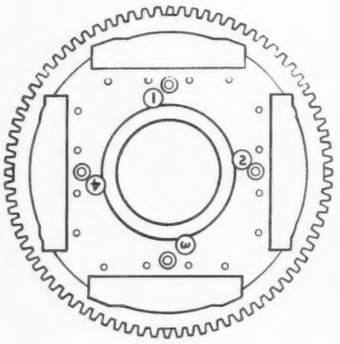

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This magazine (for models L, 4, 5, 6, 8, 14, 18, 19, 25, 26) represents culmination of ten years' constant improvement manufacturing magazines. It is light—20 pounds lighter than an old style magazine. We use duralumin for top plate and brass for lower plate. Resulting magazine has all best features with criticisms of none. It is light, yet rugged. Superior to others in quality yet as low as others in cost. Time payments arranged. Also sold by nearly all dealers.

NEW CATALOG containing 108 pages, 8½ x 11, spiral-bound, is free for asking. Shows the many parts, accessories and repairs on which we can save you money.

MATERIAL WANTED: We buy, sell and trade new, used and rebuilt molds, magazines, fonts, Monomelts, motors, etc. Tell us of any surplus material.

MONTGOMERY & BACON, TOWANDA, PA.

Equipment Sales

May Kluge Installations

12 x 18 Kluge Automatic Presses—Johnson Printing Co., Minneapolis, Minn.; Clayton (Wis.) *Advance;* Grand Rapids (Minn.) *Herald Review;* Johnson Printing Company, St. Paul, Minn.; Lanesboro (Minn.) *Leader;* Leader Card Works, Milwaukee, Wis.; Calkins Brothers, Antigo, Wis.; Hein-Sutor Printing Co., Wisconsin Rapids, Wis.; Robert G. Lee Press, Chippewa Falls, Wis.; Davison (Mich.) *Index;* Record Printing Co., Grand Rapids, Mich.; The Mercury Press & Ptg. Co., Detroit, Mich.; Kellnai System, Columbus, O.; Toledo Artcraft Co., Toledo, O.; Smith Printing Co., Cincinnati, O.; T & W Printing Company, Covington, Ky.; Echo Press, Red Bank, N. J.; The Grieco Printing Co., Brooklyn, N. Y.; McCoy & Stubbs, New York, N. Y.; Speed Art Press, New York, N. Y.; The Brewton Co., Orlando, Fla.; Premier Printing Co., Jackson, Miss.; Blue Ridge Print Shop, Mount Airy, N. C.; Boise Printing Company, Boise, Idaho.; Westinghouse Elec. & Mfg. Co., East Pittsburgh, Pa.; Artcraft Press, Stroudsburg, Pa.; Stockman's Printing Service, Chester, Pa.; DeQueen (Ark.) *Bee;* Talley Printing Company, Beaumont, Texas.; Dean Printing Company, Sherman, Texas; Hughie Hodges, Fort Worth, Texas; Brookes & Sons Co., Chicago, Ill.; Ward Press, Indianapolis, Ind.; Roling Printing Company, St. Louis, Mo.; Franklin Publishing Co., Union, Mo.; Commercial Printing Co., Sioux City, Iowa; Vogue Printing Company, Los Angeles, Calif.; New Departure Division, General Motors Corp., Bristol, Conn.; Citizen Printing Co., Beverly, Mass.; Springfield Armory, Springfield, Mass.; New England Art Publishers, North Abington, Mass.; Greenwood Press, Greenwood, Rhode Island; John W. Breneman Co., Los Angeles, Calif.

12 x 18 Kluge Feeders—Kohli Printing & Office Supply Co., Monroe, Wis.; The Harlem (Mont.) *News,* Inc., Harlem, Mont.

12 x 18 Kluge Open Press—Enterprise Printing Company, Randolph, Iowa.

10 x 15 Kluge Automatic Presses—Sandberg Printing Company, Minneapolis, Minn.; Frank H. Kirner, Pittsburgh, Pa.; Manney Printing Company, Fort Worth, Texas; Harold S. Goff, Riverside, Ill.; Keefer Printing Company, Fort Wayne, Ind.

10 x 15 Kluge Feeders—Schmidt Printing Co., Sea Breeze, N. Y.; Cramer, Becker & Rathbun, Herkimer, N. Y.; Berwyn Printing Company, Berwyn, Ill.; Randolph Press, Decatur, Ill.

12 x 18 Kluge Combination Die-Cutting and Printing Presses—United Process Corporation, New York, N. Y. (12 x 18 4-roller Kluge Combination Die-Cutting and Printing Press with 5½ in. jogger); Ryder Printing Company, Portland, Oregon. (12 x 18 Kluge Combination Die-Cutting and Printing Press.)

Intertype Installations

One or more Intertypes have recently been ordered by the following: *Christian Science Monitor,* Boston, Mass.; Ogden (Utah) *Standard-Examiner;* Hill Composition Co., Baton Rouge, La.; American Typesetting Co., Detroit, Mich.; Morgan Hill (Cal.) *Times; Courier,* East Peoria, Ill.; Guyton Printing Co., Bessemer, Ala.; John J. Thomas, New York City; Bloomington (Wis.) *Record;* Draper (Utah) *Journal; Courier* and *Journal,* Lafayette, Ind.; Allied Typesetting Co., Chicago, Ill.; Wharton (Tex.) *Journal;* Illinois *State Journal,* Springfield, Ill.; Elmore Printing Co., Roswell, New Mex.; C. H. Nevins Printing Co., Pittsburgh, Pa.; S. M. Hoffman, Rockford, Ill.; *Herald,* Newton, Kas.; Mankato (Minn.) *Free Press;* William H. Pool Co., Chicago, Ill.; Sacramento (Cal.) *Bee;* Harry Lee Publishing Co., Inc., Riverhead, L. I., N. Y.; American Business Card Co., New York City; Iraan (Tex.) *Herald;* Layton Press, Inc., Milwaukee, Wis.; Ozark (Ala.) *Sun; Commercial Appeal,* Memphis, Tenn.; Peoria (Ill.) *Journal Transcript;* Peter Altenhofen, Milwaukee, Wis.; *Yoakum County Review,* Plains, Tex.; Guynes Printing Co., El Paso, Tex.; *Ocean County Leader,* Point Pleasant, N. J.; *Daily Palladium,* Pana, Ill.; *Clawson Press,* San Diego, Cal.; Soquel Print Shop, Soquel, Cal.; Dayton (Ohio) Linotyping Co.; M. & S. Typesetting Co., Chicago, Ill.; Kingston (N. Y.) *Daily Freeman;* Hughes Printing Co., East Stroudsburg, Pa.; Magnolia (Ark.) *Times;* Clark Typesetting Co., Ft. Wayne, Ind.; A. C. Advertising Service, Chicago, Ill.; Mankato (Minn.) *News.*

New Hoe Press to Vancouver

A new Hoe Universal-Unit Super-Speed Multi-Color Press was shipped recently to the Vancouver *Daily Province.* Incorporated are many features, such as solid steel cylinders mounted in anti-friction bearings, anti-friction bearing drives and a super-speed internal gear newspaper folder. Other features employed in the construction of this press include radially-adjustable form roller sockets to facilitate accurate setting of form rollers and new plate lock-up mechanism. The new lock-up accommodates plates of any size for minimum to maximum paper width without mechanical changes.

Included with this equipment is a complete plant of Hoe precision plate-making machinery.

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Technical Literature

Baskerville

Booklet, composed in Intertype's new Baskerville, discusses John Baskerville, type founder and printer, shows specimen lines of various sizes in which face is available in roman, italic and bold, and presents specimen settings using the new face. *P-Double-E File No. 1G5.*

Modern Intertypes

Booklet illustrates and describes single and double-distributor Intertypes, gives magazine capacities, and illustrates and describes mechanical features. *P-Double-E File No. 1G3.*

Machinery and Supplies

American Steel Chase Co.'s new illustrated catalog describes composing room saw-trimmers, mitreing machines, lead and rule cutters, galleys, makeup trucks, brass and perforating rule. *P-Double-E File No. 1.*

Town Topics

Bauer Typefoundry, Inc., has published an "accordion pleated" folder. On each page is a wood cut, each of which was made by Artist Hans Alexander Mueller. Beneath each wood cut is a verse composed by Miss W. Marsh. The illustrations and verses describe life as it is to be found in New York—all of which is by way of calling your attention to the things of interest in the big city.

The lower half of each page is descriptive of the foundry type faces issued by Bauer. A copy will be mailed to any interested printing executive upon request.

Inspirations for Printers

This booklet is No. 117 of Westvaco's *Inspirations for Printers*. Demonstrates ideas for printing in process color on Sterling Enamel, one and two-color effects on Inspiration Super and plain black effects on Inspiration Eggshell. *P-Double-E File No. 3.*

Linograph "50"

Catalog published by Linograph Corporation contains illustrations and descriptions of mechanical features of the Linograph 50 line-composing machine. *P-Double-E File No. 1G3.*

Shim Chart

Laminated Shim Company has published a liberally illustrated chart showing the application of shim stock to machinery including the printing industry. A copy of this chart will be mailed to any printing executive. Address your inquiry to Laminated Shim Company direct or in care of *Printing* EQUIPMENT *Engineer.*

Silver Anniversary Specials

Illustrated broadside describes printing machinery equipment items featured by Chicago Printers Machinery Co. in observance of its silver anniversary in business. Presses, cabinets, stitchers, cutters, miterers, addressing machines, etc., are featured.

Sta-hi Routomatic

Illustrated leaf describes Sta-hi's new Routomatic Stereotype Curved Plate Router which is a self-contained unit not requiring special enclosure for operation—enclosure is built on the machine. *P-Double-E File No. 2G31.*

Master Vacuum Dry-Mat Former

Folder illustrates and describes Sta-hi Master Former with built-in vacuum shrinkage attachment and other features for drying and forming stereotype dry mats. *P-Double-E File No. 2G12.*

Ludlow Bodoni Campanile

Ludlow Typograph Company presents folder printed in black, blue and red ink, specimen settings using its Bodoni Campanile series. Various sizes of this matrix face also shown. *P-Double-E File No. 1G5.*

C&P Automatic Units

Chandler & Price 14½ x 22 regular, heavy duty and super heavy duty press units are illustrated and described in a new folder which may be had for the asking. *P-Double-E File No. 5LL1.*

Knob Re-set Counting Machines

Small illustrated folder discusses Model "AR" Knob Re-set Counting Machine by F. B. Redington Co., for setting counter back to zero. Knob on counter wheel shaft outside of the case. *P-Double-E File No. 1H.*

Monotype Machine Composition Faces

Lanston Monotype Machine Company has published an 8-page section for insertion in the Monotype Specimen Book. The section contains a complete listing of Monotype faces available for machine typesetting with information covering available point sizes, set sizes, length of lower case and capital alphabets of each point size expressed in picas and inches, and a group of Monotype faces under Standard, Special and Plate Gothic arrangements. *P-Double-E File No. 1G5.*

Workshop Lathe Bulletin

A new bulletin, No. 43, has just been issued by the South Bend Lathe Works, South Bend, Indiana, illustrating and describing the three new models of the Workshop Precision Lathe, with new improvements. Copies of the new bulletin No. 43 may be had by writing the Technical Service Dept., South Bend Lathe Works, South Bend, Ind., and mentioning this magazine.

What Is Your Favorite Color?

A series of little folders, 4 in. by 5 in., each printed in a different color and published by General Printing Ink Corporation, tell you your characteristics according to your favorite color. At a recent convention where the folders were distributed, red and blue led the field. The set of six folders will be sent to those asking for it. *P-Double-E File No. 5W.*

Monotype Automatic Quadding and Centering

Lanston Monotype Machine Company has published a newly revised edition of *Automatic Quadding and Centering on the Monotype.* This device is explained and described and examples of the work done are presented. The new edition contains a considerable quantity of information not included in the first edition. A copy will be sent to anyone asking for it. *P-Double-E File No. 1G.*

ATTENTION STEREOTYPERS

Hundreds of stereotypers are getting perfect molding and stereotype mats through the use of **Franklin Apex Combination Molder** and the **Franklin Klean-print Molding Blanket.** Write today and let us send you samples and complete information on these products.

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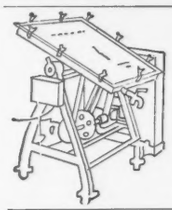
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Spark Plug Tester Becomes Static Detector

AT THE Philadelphia A.N.P.A. Mechanical Conference, William F. Grenier and "Scotty" Campbell of New England Newspaper Supply Company, presented mechanical executives with a detector for determining the presence of static in running webs on presses. The instrument is approximately 3¾ in. long by ⅜ in. diam. It consists of a transparent metal-capped tube. Within the transparent body are located two small tubes which light when static is present—one for weak static condition and both light up when static is strong.

Mr. Grenier's account of the accidental discovery of the application of the gadget for determining in what part of the web static is strongest is interesting. After having had explained to him the purpose of the instrument as a spark plug tester, he tried it out on the web of a newspaper printing press while in operation. He found that by placing the instrument at different points on the web, it would show stronger illumination of the tubes at different points on the web than at other points.

There are several makes of static eradicators on the market and these usually are placed on the press. The location of the eradicators sometimes is a matter of judgment by the manufacturer or the pressroom executive. Mr. Grenier states he found by the use of the static detector that it might be advisable to use more than one eradicator, or in some cases, that the one eradicator should be placed where the static electricity is strongest.

Having found the new application, Mr. Grenier promptly renamed the device by calling it "Static Detector."

Alexander Thomson, Sr., Passes

Alexander Thomson, Chairman of the Board, The Champion Paper and Fibre Company, Hamilton, Ohio, died at Christ Hospital, Cincinnati, June 27, following a short illness of pneumonia and heart complications.

Mr. Thomson had been associated with Champion for 42 years, starting as a mill hand at the age of 17, and successively acting as Assistant Sales Manager, Sales Manager, Vice President, President and Chairman of the Board.

He was active in many civic and business organizations. He recently completed a term as President of the Ohio Chamber of Commerce and was a member of the United States, Ohio, Cincinnati, and Hamilton Chambers. Mr. Thomson was a member of the board of both the National Association of Manufacturers and United States Chamber of Commerce and a director of Cincinnati Federal Reserve Bank. He had membership and a keen interest in many paper and board associations and for years enjoyed a close contact with youth through his work with the Boy Scouts and Young Men's Christian Association.

Employees Celebrate

Members of the Bay region printing industries celebrated "Printing Industry Day" on Treasure Island, on San Francisco Bay, Saturday, June 10.

Early afternnon hours were spent with a business session and entertainment.

Employees and clients of the Schmidt Lithograph Company of San Francisco, were guests of the company at the Golden Gate International Exposition on Saturday, June 10, when Schmidt Lithograph day was celebrated on Treasure Island.

New methods in lithographing were discussed.

New Mergenthaler Faces

C. H. Griffith, Mergenthaler vice-president in charge of typographic development, announces that Spartan Light with Medium; Spartan Medium with Italic; Spartan Heavy

Spartan Light. How is one to a
Spartan Medium. How is one t
Spartan Medium Italic. How is
Spartan Heavy. How is one t
Spartan Heavy Italic. How is
Spartan Black. How is one
Spartan Black Italic. How

with Italic, and Spartan Black with Italic, are now available in 8, 10, 12, and 14 point. Shown here are line showings of the 12-point size of the seven faces, in five weights.

Memphis Medium with Italic, announces the Mergenthaler Linotype Company, may now be had in 6, 8, 9, 10, 12, 14, 18 and 24

HOW is one
HOW is one
HOW is on

point. Shown here are brief showings of 24-point Memphis Medium with Italic, and of 30-point Memphis Medium Italic:

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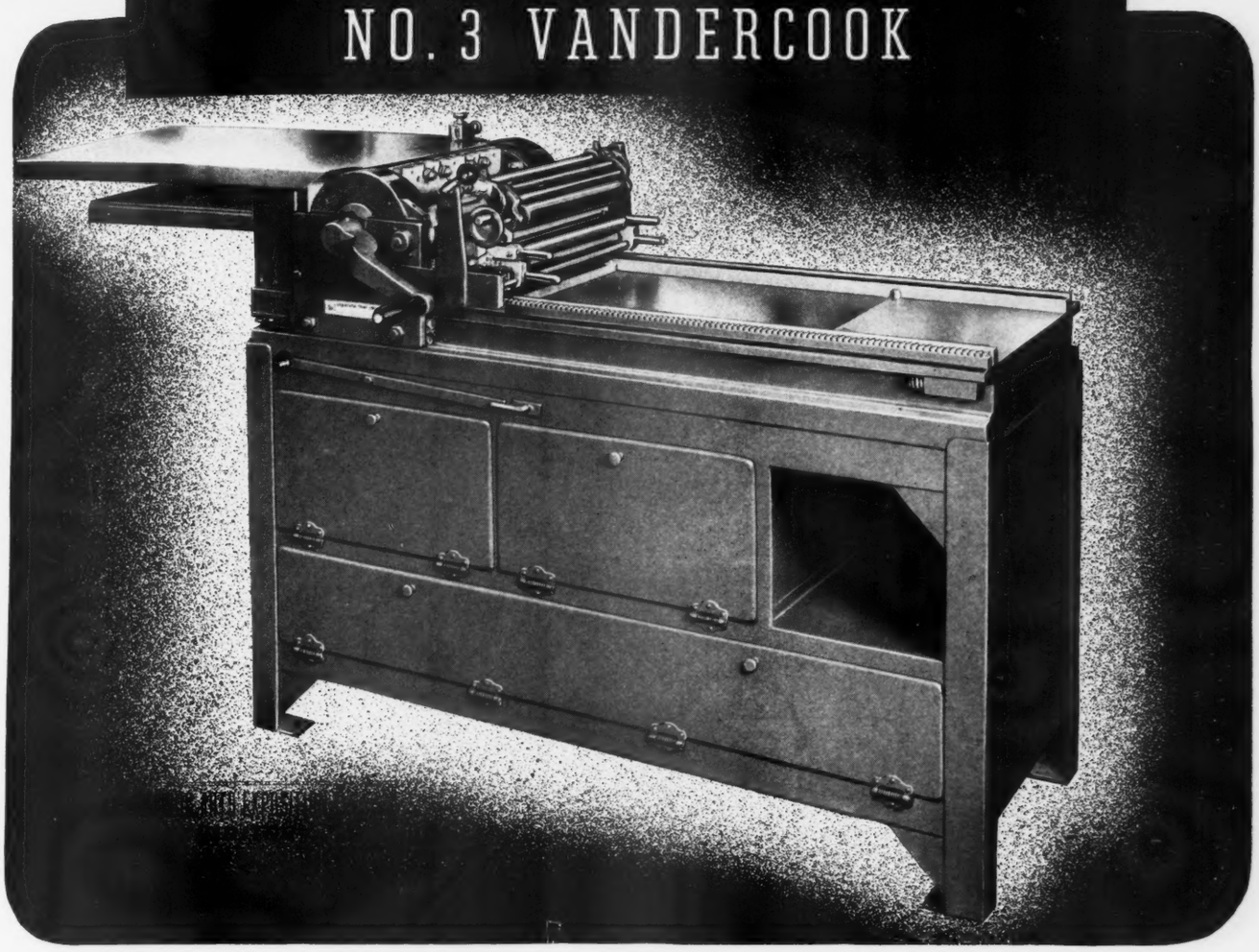

A few years ago printers could send the customer any kind of a proof that could be read---and the customer was satisfied---because that was general practice.

Forward looking printers changed this. They now show fine proofs that equal the finished job. Such proofs make a better impression on the customer, reduce errors, and eliminate arguments.

Now buyers of printing and advertising EXPECT good proofs. No. 3 Vandercook Proof Press prints them quickly and economically --- big halftones or single lines. The No. 3 Vandercook Proof Press takes a form 14"x18". Inking is automatic and coverage is thorough. Register is positive. Four color process plates the capacity of the press can be printed perfectly.

The No. 3 Vandercook Proof Press can be used for premakeready or final check of forms. It is the favorite in many composing rooms throughout the world.

Complete information on the No. 3 Vandercook, and other models, will be mailed at your request and without obligation to you. Write today.

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